

## **Detailed study schedule with changes according to faculty council decisions as well as detailed information**

Status: 09.10.2026

### **Content:**

[Mandatory area](#)

[Compulsory elective area](#)

Assignment of the compulsory elective modules of the fields of study in detail (semesters 1 to 4)

- [Field of study General and Structural Mechanical Engineering \(AKM\)](#)
- [Field of study Power Engineering \(ET\)](#)
- [Field of study Automotive and Railway Vehicle Engineering \(KST\)](#)
- [Field of study Lightweight Engineering \(LB\)](#)
- [Field of study Aerospace Engineering \(LRT\)](#)
- [Field of study Production Engineering \(PT\)](#)
- [Field of study Simulation Methods in Mechanical Engineering \(SIM\)](#)
- [Field of study Processing Machines and Textile Machines Engineering \(VTMB\)](#)

[Annex](#)

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## Curriculum

with the type and scope of the Courses in SWS as well as required performances, the type, scope and Design of which can be found in the module descriptions

| Module no.               | Module name                                                            | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester          | 4 <sup>th</sup> Semester                                                                                                           | 5 <sup>th</sup> Semester | LP |
|--------------------------|------------------------------------------------------------------------|--------------------------|--------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----|
|                          |                                                                        | V*/Ü*)/S/P/T             | V*/Ü*)/S/P/T             | V*/Ü*)/S/P/T<br>(M)               | V*/Ü*)/S/P/T<br>(M)                                                                                                                | V*/Ü*)/S/P/T             |    |
| Mandatory area           |                                                                        |                          |                          |                                   |                                                                                                                                    |                          |    |
| <a href="#">MW-MB-21</a> | Research Internship                                                    |                          |                          | 0/0/0/0/0<br>1 SWS Project<br>(8) | 0/0/0/0/0<br>1 SWS Project,<br>Project Work -<br>425 h (-<br>completion<br>time 26 weeks)<br>with -<br>presentation<br>2xPL<br>(8) |                          | 16 |
| <a href="#">MW-MB-22</a> | Interdisciplinary Technical Qualification of<br>Mechanical Engineering |                          |                          | ##/##/## PL <sup>1)</sup><br>(4)  | ##/##/## PL <sup>1)</sup><br>(4)                                                                                                   |                          | 8  |
| Diploma thesis           |                                                                        |                          |                          |                                   |                                                                                                                                    | 27                       | 27 |
| Colloquium               |                                                                        |                          |                          |                                   |                                                                                                                                    | 3                        | 3  |

| Module no.                                                                                                                                          | Module name                                                                                                                   | 1 <sup>st</sup> Semester                     | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                                                                                                                     |                                                                                                                               | V*//Ü*)/S/P/T                                | V*//Ü*)/S/P/T            | V*//Ü*)/S/P/T<br>(M)     | V*//Ü*)/S/P/T<br>(M)     | V*//Ü*)/S/P/T            |    |
| Compulsory elective area                                                                                                                            |                                                                                                                               |                                              |                          |                          |                          |                          |    |
| Field of study General and Structural Mechanical Engineering (AKM) <sup>2)</sup>                                                                    |                                                                                                                               |                                              |                          |                          |                          |                          |    |
| Elective modules                                                                                                                                    |                                                                                                                               |                                              |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                                                                                                             |                                                                                                                               |                                              |                          |                          |                          |                          |    |
| MW-MB-18<br>4, 9, 36, 70, 75                                                                                                                        | Measurement and Automation Engineering                                                                                        | 2/1/0/1/0 PL<br>(4)                          | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| MW-MB-19<br>70, 75                                                                                                                                  | Extended Fundamentals for Mechanical Engineering                                                                              | ##/##/##/##<br>PL <sup>3)</sup>              |                          |                          |                          |                          | 5  |
| MW-MB-AKM-01 <sup>17, 23, 24, 32, 70, 75</sup><br>MW-MB-KST-28 <sup>17, 23, 24, 32, 70, 75</sup><br>MW-MB-VTMB-01 <sup>17, 23, 24, 32, 70, 75</sup> | Fundamentals of Construction and Dynamic Dimensioning of Machines<br>- Constructive Development Process<br>- Machine Dynamics | 4/2/0/1/0 2xPL<br><br>2/0/0/1/0<br>2/2/0/0/0 |                          |                          |                          |                          | 7  |
| MW-MB-AKM-02 <sup>70, 75</sup><br>MW-MB-KST-01 <sup>70, 75</sup>                                                                                    | Fluid Power and Electrical Drive Systems<br>- Basics of Fluid Power Drives and Controls<br>- Electric Drives                  | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0       |                          |                          |                          |                          | 7  |
| MW-MB-AKM-03 <sup>70, 75</sup>                                                                                                                      | Mechanical Drives<br>- Drive Elements<br>- Design Document Drive Assembly                                                     | 2/3/0/0/0 2xPL<br>2/1/0/0/0<br>0/2/0/0/0     |                          |                          |                          |                          | 7  |
| MW-MB-ET-03 <sup>1, 42</sup>                                                                                                                        | Fundamentals of Heat and Mass Transfer<br>- Combustion Technology<br>- Heat and Mass Transfer                                 | 4/3/0/0/0 PL<br>2/1/0/0/0<br>2/2/0/0/0       |                          |                          |                          |                          | 7  |

| Module no.                                | Module name                                                                                                                                                                             | 1 <sup>st</sup> Semester                                           | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                           |                                                                                                                                                                                         | V*/Ü*/S/P/T                                                        | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |    |
| <a href="#">MW-MB-LB-02</a> 70, 75, 79    | Lightweight Materials<br>- Fundamentals of Polymer Materials<br>- Plastics Testing<br>- Non-ferrous Metals, Ceramics, Natural Materials                                                 | 5/0/0/1/0 2xPL<br>2/0/0/0/0<br>1/0/0/1/0<br>2/0/0/0/0              |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-03</a> 1, 39, 70, 75 | Fiber-Reinforced Materials<br>- Fibre Composites<br>- Textile semi-finished Products and Process                                                                                        | 4/1/0/1/0 PL<br>2/1/0/0/0<br>2/0/0/1/0                             |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-PT-01</a> 1, 70, 75     | Production Engineering - Manufacturing Processes<br>- Joining Technology<br>- Surface and Coating Technology<br>- Forming and Remoulding Technology<br>- Cutting and Removal Technology | 4/2/0/0/0 2xPL<br>1/0/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0<br>1/1/0/0/0 |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-PT-02</a> 54, 70        | Production Engineering - Manufacturing and Planning<br>- Occupational Science<br>- Production Planning<br>- Production and Logistics                                                    | 4/1/0/0/0 PL<br>1/0/0/0/0<br>2/1/0/0/0<br>1/0/0/0/0                |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-PT-03</a> 70, 75        | Production Engineering - Machine Tools and Production Automatization<br>- Production Automation<br>- Machine Tools - Basics                                                             | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                             |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-SIM-03</a>              | Elastic Structures and Technical Fluid Mechanics<br>- Elastic Structures<br>- Engineering Fluid Mechanics                                                                               | 4/2/0/1/0 2xPL<br>2/1/0/0/0<br>2/1/0/1/0                           |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-VTMB-03</a> 1           | Fundamentals of Processing and Textile Mechanical Engineering<br>- Fundamentals of Textile Mechanical Engineering<br>- Basics of Processing Machine Construction                        | 4/1/0/1/0 PL<br>2/0/0/1/0<br>2/1/0/0/0                             |                          |                          |                          |                          | 7  |

| Module no.                                                  | Module name                                                                                                                                             | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                            | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                             |                                                                                                                                                         | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                         | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-04</a>                                | Analysis and Dimensioning<br>- Selected Analyses and Dimensioning<br>- Operational Strength                                                             |                          | 3/1/0/1/0 PL<br>2/0/0/1/0<br>1/1/0/0/0              |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-07</a>                                | Fluid Power Components and Systems<br>- Sealing Technology<br>- Fluid Power Components and Systems                                                      |                          | 4/1/0/0/0 PL<br>2/0/0/0/0<br>2/1/0/0/0              |                          |                          |                          | 6        |
| <a href="#">MW-MB-AKM-08</a>                                | Off-road Vehicle Technology - Systems<br>- Construction Machinery Technology<br>- Recycling Technology<br>- Engines and steering Systems                |                          | 5/0/0/0/0 PL<br>2/0/0/0/0<br>1/0/0/0/0<br>2/0/0/0/0 |                          |                          |                          | 6        |
| <a href="#">MW-MB-AKM-10</a> <sup>20</sup>                  | <del>Industrial Design Methodology</del><br><del>– Introduction to Design Process and -Tools</del><br><del>– Internship Design Process and -Tools</del> |                          | 2/0/0/2/0 2xPL<br>2/0/0/0/0<br>0/0/0/2/0            |                          |                          |                          | 6        |
| <a href="#">MW-MB-AKM-11</a> <sup>20</sup>                  | <del>Two-Dimensional Design Fundamentals</del><br><del>– Colour and Material</del><br><del>– Graphic</del>                                              |                          | 2/0/0/3/0 PL<br>1/0/0/1/0<br>1/0/0/2/0              |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-30</a> <sup>20</sup>                  | Industrial Design Methodology in Product Development<br>- Introduction to Design Process and -Tools<br>- Internship Design Process and -Tools           |                          | 2/0/0/2/0 2xPL<br><br>2/0/0/0/0<br>0/0/0/2/0        |                          |                          |                          | 6        |
| <a href="#">MW-MB-AKM-31</a> <sup>20, 86</sup>              | Two-Dimensional Design Fundamentals in Industrial Design<br>- Two-Dimensional Design Fundamentals in Industrial Design                                  |                          | 2/0/0/3/0 PL<br><br>2/0/0/3/0                       |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-05</a>                                 | Fiber Composites Technology<br>- Fiber Composites Technology<br>- Connection Techniques                                                                 |                          | 3/2/0/0/0 PL<br>1/1/0/0/0<br>2/1/0/0/0              |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-04</a> <sup>1, 9, 32, 42, 54, 92</sup> | Fundamentals of Power Machinery<br>- Turbomachinery Basics<br>- Fundamentals of Piston Machines                                                         |                          | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0            |                          |                          |                          | <b>6</b> |

| Module no.                                                                                                       | Module name                                                                                                                                                  | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                  | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                                                                                  |                                                                                                                                                              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                               | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |    |
| <a href="#">MW-MB-AKM-05</a> <sup>86</sup>                                                                       | Intralogistics - Fundamentals<br>- Elements and supporting Structures<br>- Logistics Lab<br>- Design of intralogistics systems                               |                          | 3/1/0/2/0 2xPL<br>1/1/0/0/0<br>0/0/0/2/0<br>2/0/0/0/0     |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-06</a>                                                                                     | Fundamentals of Agricultural Systems Technology<br>- Basics of the Functioning of Machines<br>- Tractor Technology<br>- Agricultural Processes and Machinery |                          | 4/2/0/0/0 2xPL<br><br>0/2/0/0/0<br>2/0/0/0/0<br>2/0/0/0/0 |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-09</a> <sup>17, 26</sup><br><a href="#">MW-MB-KST-29</a> <sup>17, 26</sup>                 | Tools and Methods of Product Development<br><del>– Digital MockUp in Product Development</del><br><del>– Designing with CAD</del>                            |                          | 2/4/0/0/0 2xPL<br>1/2/0/0/0<br>1/2/0/0/0                  |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-12</a>                                                                                     | Three-Dimensional Design Fundamentals<br><del>– Freehand Drawing</del><br><del>– Plastic Design</del>                                                        |                          | 2/0/0/4/0 PL<br>1/0/0/2/0<br>1/0/0/2/0                    |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-32</a> <sup>20</sup>                                                                       | Three-Dimensional Design Fundamentals in Industrial Design<br>- Freehand Drawing<br>- Plastic Design                                                         |                          | 2/0/0/4/0 PL<br><br>1/0/0/2/0<br>1/0/0/2/0                |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-37</a> <sup>26, 32, 70, 75</sup><br><a href="#">MW-MB-KST-32</a> <sup>26, 32, 70, 75</sup> | Methodical Product Development and Selected Tools<br>- Digital MockUp in Product Development<br>- Designing with CAD                                         |                          | 2/4/0/0/0 2xPL<br><br>1/2/0/0/0<br>1/2/0/0/0              |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-06</a> <sup>79</sup>                                                                        | Fundamentals of Polymer Technology<br>- Plastics Technology<br>- Plastics Processing                                                                         |                          | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                    |                          |                          |                          | 7  |
| <a href="#">MW-MB-PT-04</a> <sup>47, 70, 75</sup>                                                                | Manufacturing Processes - deepening<br>- Welding Process<br>- Forming Process Design                                                                         |                          | 3/2/0/0/0 PL<br>2/1/0/0/0<br>1/1/0/0/0                    |                          |                          |                          | 7  |

| Module no.                                            | Module name                                                                                                                                                                                 | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                     | 3 <sup>rd</sup> Semester                                                                        | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP           |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------|
|                                                       |                                                                                                                                                                                             | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                  | V*/Ü*/S/P/T<br>(M)                                                                              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |              |
| <a href="#">MW-MB-VTMB-04</a> <sup>1</sup>            | Machine Design and Diagnostics<br>- Design and Construction of Machines<br>- Dynamic Behaviour and Diagnosis of Machines                                                                    |                          | 3/1/0/2/0 2xPL<br>2/1/0/0/0<br><br>1/0/0/2/0 |                                                                                                 |                          |                          | <b>7</b>     |
| Choice of 3 out of 7 modules                          |                                                                                                                                                                                             |                          |                                              |                                                                                                 |                          |                          |              |
| <del><a href="#">MW-MB-AKM-22</a></del> <sup>93</sup> | <del>Intralogistics – System Design</del><br><del>– Analytical Methods</del><br><del>– Simulation-based System Optimisation</del><br><del>– System Design IL System</del>                   |                          |                                              | <del>4/1/0/0/0 PL</del><br><del>2/0/0/0/0</del><br><del>2/0/0/0/0</del><br><del>0/1/0/0/0</del> |                          |                          | <del>6</del> |
| <a href="#">MW-MB-AKM-23</a> <sup>94</sup>            | Fluid-Mechatronics in Mobile Applications<br>- Mobile Hydraulics<br>- Internship Fluid Power in Mobile Applications<br>- Controls, Software Development and Security in Mobile Applications |                          |                                              | 3/1/0/1/0 2xPL<br>2/1/0/0/0<br><br>0/0/0/1/0<br><br>1/0/0/0/0                                   |                          |                          | 6            |
| <a href="#">MW-MB-AKM-24</a> <sup>94</sup>            | Computational Engineering in Fluid Power<br>- Modelling and Simulation of Fluid Power Components<br>- Modelling and Simulation of Fluid Power Systems                                       |                          |                                              | 2/3/0/0/0 PL<br><br>1/1/0/0/0<br><br>1/2/0/0/0                                                  |                          |                          | <b>6</b>     |
| <a href="#">MW-MB-AKM-25</a> <sup>46, 94</sup>        | Material Handling<br>- Hoisting Machines<br>- Design Document main Assembly of a Hoisting Machine                                                                                           |                          |                                              | 1/3/0/0/0 2xPL<br>1/1/0/0/0<br><br>0/2/0/0/0                                                    |                          |                          | <b>6</b>     |
| <a href="#">MW-MB-AKM-26</a> <sup>94</sup>            | Mobile Machinery/Off-road Vehicle Technology – Analysis<br>- Experimental Analysis<br>- Modelling and Simulation of off-road Vehicle Systems                                                |                          |                                              | 2/1/0/2/0 2xPL<br><br>0/0/0/2/0<br><br>2/1/0/0/0                                                |                          |                          | <b>6</b>     |
| <del><a href="#">MW-MB-AKM-27</a></del> <sup>20</sup> | <del>Human-centered Product Design</del><br><del>– User-centred Product Development</del>                                                                                                   |                          |                                              | <del>1/0/0/4/0 PL</del><br><del>1/0/0/4/0</del>                                                 |                          |                          | <del>6</del> |

| Module no.                                             | Module name                                                                                                                                                                                                         | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                 | 4 <sup>th</sup> Semester                                      | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|------------------------------------------|---------------------------------------------------------------|--------------------------|----------|
|                                                        |                                                                                                                                                                                                                     | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                       | V*/Ü*/S/P/T<br>(M)                                            | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-28</a> <sup>20</sup>             | <del>Visualization Techniques</del><br><del>– Information Visualisation and HMI</del><br><del>– Rendering Techniques</del>                                                                                          |                          |                          | 2/0/0/3/0 PL<br>1/0/0/2/0<br>1/0/0/1/0   |                                                               |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-29</a> <sup>17, 32, 52, 94</sup> | Systems Engineering<br>- Design of Mechatronic Systems<br>- Interdisciplinary Product Development                                                                                                                   |                          |                          | 3/2/0/1/0 2xPL<br>2/1/0/0/0<br>1/1/0/1/0 |                                                               |                          | 6        |
| <a href="#">MW-MB-AKM-35</a> <sup>20, 46, 94</sup>     | User-Centered Product Design                                                                                                                                                                                        |                          |                          | 1/0/0/4/0 PL<br>1/0/0/4/0                |                                                               |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-36</a> <sup>20, 94</sup>         | Product and Information Visualization<br>- Information Visualisation and HMI<br>- Rendering Techniques                                                                                                              |                          |                          | 2/0/0/3/0 PL<br>1/0/0/2/0<br>1/0/0/1/0   |                                                               |                          | <b>6</b> |
| Choice of 3 out of 9 modules                           |                                                                                                                                                                                                                     |                          |                          |                                          |                                                               |                          |          |
| <a href="#">MW-MB-AKM-13</a>                           | Simulation Methods in Drive Technology<br>- CAE Applications/FEM<br>- Modelling and Simulation of Electromechanical Drive Systems                                                                                   |                          |                          |                                          | 3/2/0/0/0 PL<br>1/1/0/0/0<br><br>2/1/0/0/0                    |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-14</a>                           | Design of Agricultural Systems Technology<br>- Functioning of Machines<br>- Product Development of Agricultural Machinery<br>- Process Automation                                                                   |                          |                          |                                          | 4/1/0/0/0 2xPL<br>1/0/0/0/0<br><br>2/0/0/0/0<br>1/1/0/0/0     |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-15</a>                           | Fluid-Mechatronics in Industrial Applications<br>- Electrohydraulic Drive Technology in Industrial Applications<br>- Internship Fluid Power in Industrial Applications<br>- Control Engineering of Pneumatic Drives |                          |                          |                                          | 2/2/0/1/0 2xPL<br><br>1/1/0/0/0<br><br>0/0/0/1/0<br>1/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-16</a> <sup>17, 32</sup>         | Product Modelling<br>- Product Data Management<br>- Synthesis and Analysis of Product Models                                                                                                                        |                          |                          |                                          | 3/2/0/0/0 PL<br>1/1/0/0/0<br>2/1/0/0/0                        |                          | <b>6</b> |

| Module no.                                                                                                       | Module name                                                                                                         | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                                                   | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------|--------------------------|----------|
|                                                                                                                  |                                                                                                                     | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                                         | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-17</a>                                                                                     | Materials and Failure Analysis<br>- Construction Materials<br>- Friction, Wear and Damage                           |                          |                          |                          | 4/1/0/0/0 PL<br>2/1/0/0/0<br>2/0/0/0/0                                     |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-18</a> <sup>17, 25, 32, 46</sup><br><a href="#">MW-MB-SIM-10</a> <sup>17, 25, 32, 46</sup> | Virtual Methods and Tools<br>- Reverse Engineering and optionally<br>- Free-form Modelling or<br>- Hybrid Modelling |                          |                          |                          | 2/1/0/2/0 2xPL<br>1/1/0/0/0<br>and optionally<br>1/0/0/2/0 or<br>1/0/0/2/0 |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-19</a><br><a href="#">MW-MB-SIM-12</a>                                                     | Data Processing and Experimental Model Analysis<br>- Experimental Modal Analysis<br>- Measured Value Processing     |                          |                          |                          | 3/2/0/1/0 PL<br><br>1/1/0/1/0<br>2/1/0/0/0                                 |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-20</a> <sup>20</sup>                                                                       | <del>Design Research</del><br><del>– Methods and Tools in Design Research</del><br><del>– Product Experience</del>  |                          |                          |                          | 3/1/0/1/0 2xPL<br>2/1/0/0/0<br>1/0/0/1/0                                   |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-21</a> <sup>20</sup>                                                                       | <del>Design of Product-Service-Systems</del><br><del>– Design of Product-Service-Systems</del>                      |                          |                          |                          | 1/0/0/4/0 PL<br>1/0/0/4/0                                                  |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-33</a> <sup>20, 46, 61</sup>                                                               | Design Research and Product Experience<br>- Design Research and Product Experience                                  |                          |                          |                          | 3/1/0/1/0 PL<br>3/1/0/1/0                                                  |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-34</a> <sup>20, 46</sup>                                                                   | Product-Service-Systems<br>- Product-Service-Systems                                                                |                          |                          |                          | 1/0/0/4/0 PL<br>1/0/0/4/0                                                  |                          | <b>6</b> |

| Module no.                                                                                                                                                                                                         | Module name                                                                                                                                                              | 1 <sup>st</sup> Semester                                        | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                                                                                                                                                                                    |                                                                                                                                                                          | V*)/Ü*)/S/P/T                                                   | V*)/Ü*)/S/P/T            | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T            |    |
| Field of study Power Engineering (ET) <sup>2)</sup>                                                                                                                                                                |                                                                                                                                                                          |                                                                 |                          |                          |                          |                          |    |
| Elective modules                                                                                                                                                                                                   |                                                                                                                                                                          |                                                                 |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                                                                                                                                                                            |                                                                                                                                                                          |                                                                 |                          |                          |                          |                          |    |
| <a href="#">MW-MB-18</a><br><a href="#">4, 9, 36, 70, 75</a>                                                                                                                                                       | Measurement and Automation Engineering                                                                                                                                   | 2/1/0/1/0 PL<br>(4)                                             | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| <a href="#">MW-MB-19</a><br><a href="#">70, 75</a>                                                                                                                                                                 | Extended Fundamentals for Mechanical Engineering                                                                                                                         | ##/##/##/##<br>PL 3)                                            |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-ET-01</a> <a href="#">1, 42</a>                                                                                                                                                                  | Fluid Mechanics and Simulation Methods<br><br>- Simulation Tools in Power Engineering<br>- Flow Simulation for Engineering Applications<br>- Engineering Fluid Mechanics | 4/2/0/1/0 PVL,<br>PL<br>1/0/0/0/0<br><br>1/1/0/0/0<br>2/1/0/1/0 |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-ET-02</a> <a href="#">1, 9, 54</a>                                                                                                                                                               | Process Thermodynamics<br>- Process Thermodynamics<br>- Reaction Process Engineering                                                                                     | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                          |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-ET-03</a> <a href="#">1, 42</a>                                                                                                                                                                  | Fundamentals of Heat and Mass Transfer<br>- Combustion Technology<br>- Heat and Mass Transfer                                                                            | 4/3/0/0/0 PL<br>2/1/0/0/0<br>2/2/0/0/0                          |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-01</a> <a href="#">17, 23, 24, 32, 70, 75</a><br><a href="#">MW-MB-KST-28</a> <a href="#">17, 23, 24, 32, 70, 75</a><br><a href="#">MW-MB-VTMB-01</a> <a href="#">17, 23, 24, 32, 70, 75</a> | Fundamentals of Construction and Dynamic Dimensioning of Machines<br>- Constructive Development Process<br>- Machine Dynamics                                            | 4/2/0/1/0 2xPL<br><br>2/0/0/1/0<br>2/2/0/0/0                    |                          |                          |                          |                          | 7  |

| Module no.                                                                                       | Module name                                                                                                                                                                             | 1 <sup>st</sup> Semester                                               | 2 <sup>nd</sup> Semester                   | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                  |                                                                                                                                                                                         | V*/Ü*/S/P/T                                                            | V*/Ü*/S/P/T                                | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-02</a> <sup>70, 75</sup><br><a href="#">MW-MB-KST-01</a> <sup>70, 75</sup> | Fluid Power and Electrical Drive Systems<br>- Basics of Fluid Power Drives and Controls<br>- Electric Drives                                                                            | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                                 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-AKM-03</a> <sup>70, 75</sup>                                                   | Mechanical Drives<br>- Drive Elements<br>- Design Document Drive Assembly                                                                                                               | 2/3/0/0/0 2xPL<br>2/1/0/0/0<br>0/2/0/0/0                               |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-KST-03</a> <sup>52</sup>                                                       | Fundamentals of Internal Combustion Engines and Drive Systems<br>- Drive Systems<br>- Fundamentals of Combustion Engines<br>- Design Document Drive Assembly                            | 4/2/0/0/0 2xPL<br><br>2/0/0/0/0<br>2/0/0/0/0<br>0/2/0/0/0              |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-01</a> <sup>1, 70, 75</sup>                                                 | Production Engineering - Manufacturing Processes<br>- Joining Technology<br>- Surface and Coating Technology<br>- Forming and Remoulding Technology<br>- Cutting and Removal Technology | 4/2/0/0/0 2xPL<br><br>1/0/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0<br>1/1/0/0/0 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-ET-04</a> <sup>1, 9, 32, 42, 54, 92</sup>                                      | Fundamentals of Power Machinery<br>- Turbomachinery Basics<br>- Fundamentals of Piston Machines                                                                                         |                                                                        | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0   |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-05</a> <sup>1, 39, 42</sup>                                                 | Fundamentals of Refrigeration and Air Conditioning<br>- Basics of Refrigeration Technology<br>- Basics of Air Conditioning Technology                                                   |                                                                        | 4/2/0/0/0 PL<br><br>2/2/0/0/0<br>2/0/0/0/0 |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-37</a> <sup>39, 42</sup>                                                    | Principles of Refrigeration and Air Conditioning<br>- Principles of Refrigeration<br>- Principles of Air Conditioning                                                                   | 4/2/0/0/0 PL<br><br>2/2/0/0/0<br>2/0/0/0/0                             |                                            |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-07</a>                                                                     | Fluid Power Components and Systems<br>- Sealing Technology<br>- Fluid Power Components and Systems                                                                                      |                                                                        | 4/1/0/0/0 PL<br>2/0/0/0/0<br>2/1/0/0/0     |                          |                          |                          | <b>6</b> |

| Module no.                                                                                       | Module name                                                                                                                                                                            | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                  | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                  |                                                                                                                                                                                        | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                               | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-KST-05</a>                                                                     | Construction Materials and Structural Durability<br>- Construction Materials<br>- Operational Strength                                                                                 |                          | 3/1/0/0/0 PL<br><br>2/0/0/0/0<br>1/1/0/0/0                |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-07</a>                                                                     | Advanced Course: Internal Combustion Engines<br>- Internal Combustion Engine Design<br>- Selected Chapters of Internal Combustion Engines                                              |                          | 4/0/0/0/0 PL<br><br>2/0/0/0/0<br>2/0/0/0/0                |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-10</a> <sup>70, 75</sup>                                                    | Production Measurement Technology<br>- Higher Metrology in Mechanical Engineering<br>- Coordinate Measuring Technology                                                                 |                          | 4/0/0/2/0 PL<br><br>2/0/0/1/0<br>2/0/0/1/0                |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-07</a>                                                                     | Experimental Fluid and Solid Mechanics<br>- Experimental Solid Mechanics<br>- Experimental Fluid Mechanics                                                                             |                          | 4/0/0/2/0 2xPL<br>2/0/0/1/0<br>2/0/0/1/0                  |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-06</a> <sup>9, 17</sup>                                                     | Fundamentals of Non-Fossil Primary Energy Use<br>- Renewable Energy sources<br>- Fundamentals of nuclear Energy Technology                                                             |                          | 4/2/0/1/0 2xPL<br><br>2/1/0/0/0<br>2/1/0/1/0              |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-ET-07</a>                                                                      | Heat Exchanger, Pipings, Pressure Vessels and Energy Storage<br>- Basics of Energy Storage Components<br>- Pipelines, Apparatus and Containers<br>- Heat Exchanger and Steam Generator |                          | 5/2/0/0/0 2xPL<br><br>1/0/0/0/0<br>2/1/0/0/0<br>2/1/0/0/0 |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-AKM-09</a> <sup>17, 26</sup><br><a href="#">MW-MB-KST-29</a> <sup>17, 26</sup> | Tools and Methods of Product Development<br><del>- Digital MockUp in Product Development</del><br>- Designing with CAD                                                                 |                          | 2/4/0/0/0 2xPL<br><br>1/2/0/0/0<br>1/2/0/0/0              |                          |                          |                          | <b>7</b> |

| Module no.                                                                                                       | Module name                                                                                                          | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                     | 3 <sup>rd</sup> Semester               | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------|----------------------------------------|--------------------------|--------------------------|----------|
|                                                                                                                  |                                                                                                                      | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                  | V*/Ü*/S/P/T<br>(M)                     | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-37</a> <sup>26, 32, 70, 75</sup><br><a href="#">MW-MB-KST-32</a> <sup>26, 32, 70, 75</sup> | Methodical Product Development and Selected Tools<br>- Digital MockUp in Product Development<br>- Designing with CAD |                          | 2/4/0/0/0 2xPL<br><br>1/2/0/0/0<br>1/2/0/0/0 |                                        |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-04</a> <sup>47, 70, 75</sup>                                                                | Manufacturing Processes - Advanced Course<br>- Welding Process<br>- Forming Process Design                           |                          | 3/2/0/0/0 PL<br>2/1/0/0/0<br>1/1/0/0/0       |                                        |                          |                          | <b>7</b> |
| <a href="#">MW-MB-SIM-04</a> <sup>42</sup>                                                                       | Continuum Mechanics and Multifunctional Structures<br>- Continuum Mechanics<br>- Multifunctional Structures          |                          | 4/2/0/0/0 2xPL<br><br>2/1/0/0/0<br>2/1/0/0/0 |                                        |                          |                          | <b>7</b> |
| <a href="#">MW-MB-SIM-05</a>                                                                                     | Multi-Body Dynamics and Computational Fluid Dynamics<br>- Multi-body Dynamics<br>- Computational Fluid Dynamics      |                          | 4/3/0/0/0 PL<br><br>2/2/0/0/0<br>2/1/0/0/0   |                                        |                          |                          | <b>7</b> |
| Choice of 3 out of 11 modules                                                                                    |                                                                                                                      |                          |                                              |                                        |                          |                          |          |
| <a href="#">MW-MB-ET-23</a> <sup>1, 9, 75</sup><br><a href="#">MW-MB-LRT-33</a> <sup>1, 9, 75</sup>              | Turbocompressors<br>- Turbocompressor                                                                                |                          |                                              | 2/2/0/0/0 PL<br>2/2/0/0/0              |                          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-25</a> <sup>3</sup>                                                                         | Heat Supply<br><del>District Heating Supply</del><br>- <del>Heating Technology</del>                                 |                          |                                              | 3/2/0/0/0 PL<br>2/2/0/0/0<br>1/0/0/0/0 |                          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-26</a> <sup>9</sup>                                                                         | Energy and Load Management<br>- Energy Management and Optimisation<br>- Load Management                              |                          |                                              | 3/3/0/0/0 PL<br>2/2/0/0/0<br>1/1/0/0/0 |                          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-27</a> <sup>9</sup>                                                                         | Cryogenics <sup>6)</sup><br>- Cryogenics                                                                             |                          |                                              | 3/2/0/0/0 PL<br>3/2/0/0/0              |                          |                          | <b>6</b> |

| Module no.                                  | Module name                                                                                                                                                                                          | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                       | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|------------------------------------------------|--------------------------|--------------------------|----|
|                                             |                                                                                                                                                                                                      | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                             | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |    |
| <a href="#">MW-MB-ET-28<sup>3</sup></a>     | Heat Pumps, Organic Vapour Cycle Processes (ORC) and ORC Machines<br><del>– ORC – Processes and Machines</del><br><del>– Heat Pumps and Expansion Machines</del>                                     |                          |                          | 4/1/0/1/0 2xPL<br><br>2/1/0/0/0<br>2/0/0/1/0   |                          |                          | 6  |
| <a href="#">MW-MB-ET-29<sup>8</sup></a>     | Innovative Energy Storage Systems<br><del>– Innovative Energy Storage Applications</del><br><del>– Control and Optimisation of Energy Storage Systems</del>                                          |                          |                          | 4/1/0/1/0 PL<br><br>2/0/0/0/0<br>2/1/0/1/0     |                          |                          | 6  |
| <a href="#">MW-MB-ET-30<sup>9, 17</sup></a> | Process Simulation and Validation in Power Engineering<br>- Modelling and Simulation of Energy Storage Systems and Energy converters using MATLAB/Simulink<br>- Simulation of Thermal Processes      |                          |                          | 4/2/0/0/0 PL<br><br>2/1/0/0/0<br>2/1/0/0/0     |                          |                          | 6  |
| <a href="#">MW-MB-ET-31<sup>9, 17</sup></a> | Process Measurement Technology and Mathematical Methods of Measurement Data Processing<br>- Mathematical Methods of signal and image Data Processing<br>- Process Measurement Technology and sensors |                          |                          | 4/0/0/1/0 PL<br><br>2/0/0/1/0<br><br>2/0/0/0/0 |                          |                          | 6  |
| <a href="#">MW-MB-ET-32<sup>9, 17</sup></a> | Thermo Hydraulics and Safety of Nuclear Facilities<br>- Nuclear Safety Methods<br>- Thermohydraulics of nuclear reactors                                                                             |                          |                          | 3/1/0/1/0 2xPL<br><br>2/1/0/1/0<br>1/0/0/0/0   |                          |                          | 6  |
| <a href="#">MW-MB-ET-33<sup>9</sup></a>     | Hydrogen Energy Technology<br>- Hydrogen Energy Technology                                                                                                                                           |                          |                          | 3/1/0/1/0 2xPL<br>3/1/0/1/0                    |                          |                          | 6  |
| <a href="#">MW-MB-ET-34<sup>9, 43</sup></a> | Load Management of Refrigeration Plants<br><del>– Load Management of Refrigeration and Air Conditioning Systems</del><br><del>– Components and Control for variable load requirements</del>          |                          |                          | 2/2/0/0/0 PL<br><br>1/1/0/0/0<br><br>1/1/0/0/0 |                          |                          | 6  |

| Module no.                                           | Module name                                                                                                                                                                                  | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                       | 4 <sup>th</sup> Semester               | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|------------------------------------------------|----------------------------------------|--------------------------|----------|
|                                                      |                                                                                                                                                                                              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                             | V*/Ü*/S/P/T<br>(M)                     | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-ET-38</a> <sup>3, 9, 39</sup>      | Processes and Machines for Low Temperature and Waste Heat Utilization<br>- ORC - Processes and Machines<br>- Heat Pumps and Expansion Machines                                               |                          |                          | 4/2/0/0/0 PL<br><br>2/1/0/0/0<br>2/1/0/0/0     |                                        |                          | <b>6</b> |
| <a href="#">MW-MB-ET-39</a> <sup>3, 9</sup>          | District Heating Systems<br>- District Heating Supply<br>- Heating Technology                                                                                                                |                          |                          | 3/2/0/0/0 PL<br>2/2/0/0/0<br>1/0/0/0/0         |                                        |                          | <b>6</b> |
| <a href="#">MW-MB-ET-41</a> <sup>8, 9</sup>          | Methods and System Concepts for Innovative Energy Storage Applications<br>- Hybrid Storage Systems and Sector Coupling<br>- Innovative Energy Storage Applications                           |                          |                          | 4/2/0/0/0 PL<br><br>2/2/0/0/0<br>2/0/0/0/0     |                                        |                          | <b>6</b> |
| <a href="#">MW-MB-ET-43</a> <sup>43, 65</sup>        | Demand Side management of refrigeration systems and heat pumps<br>- Demand Side Management of Refrigeration and Air Conditioning Systems<br>- Control of Refrigeration and Heat Pump Systems |                          |                          | 2/2/0/0/0 PL<br><br>1/1/0/0/0<br><br>1/1/0/0/0 |                                        |                          | <b>6</b> |
| Choice of 3 out of 18 modules                        |                                                                                                                                                                                              |                          |                          |                                                |                                        |                          |          |
| <a href="#">MW-MB-ET-08</a> <sup>9, 32, 53</sup>     | <del>Steam and Gas Turbines</del><br>- <del>Steam and Gas Turbines</del>                                                                                                                     |                          |                          |                                                | <del>4/2/0/0/0 2xPL</del><br>4/2/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-ET-09</a> <sup>9, 32, 46, 92</sup> | Turbo Pumps and Piston Working Machines<br>- Turbopumps and Reciprocating Machines                                                                                                           |                          |                          |                                                | 2/2/0/0/0 2xPL<br>2/2/0/0/0            |                          | <b>6</b> |
| <a href="#">MW-MB-ET-10</a> <sup>9</sup>             | Building Energy Systems<br>- Basics of Building Energy Technology<br>- Heat pump Systems                                                                                                     |                          |                          |                                                | 3/3/0/0/0 PL<br>2/2/0/0/0<br>1/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-ET-11</a> <sup>9, 66, 81</sup>     | Air Conditioning Systems/Supply Engineering<br>- Indoor Air and Air-conditioning Technology<br>- Gas and Sanitary Engineering                                                                |                          |                          |                                                | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-ET-12</a> <sup>9</sup>             | Evaluation of Energy Efficiency and Economy<br>- Energy Assessment                                                                                                                           |                          |                          |                                                | 2/2/0/1/0 PL<br>2/2/0/1/0              |                          | <b>6</b> |

| Module no.                                                                                                       | Module name                                                                                                                                              | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                            | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-----------------------------------------------------|--------------------------|----------|
|                                                                                                                  |                                                                                                                                                          | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                  | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-ET-13</a> <sup>9, 39, 46</sup>                                                                 | Refrigeration Systems<br>- Refrigeration Systems and Components<br>- Simulation of Refrigeration Systems and Components                                  |                          |                          |                          | 3/2/0/1/0 2xPL<br>2/1/0/1/0<br><br>1/1/0/0/0        |                          | <b>6</b> |
| <a href="#">MW-MB-ET-36</a> <sup>9, 39, 46</sup>                                                                 | International Refrigeration and Compressor Course<br>- IRCC - International Refrigeration and Compressor Course Fundamentals                             |                          |                          |                          | 3/2/0/1/0 2xPL<br><br>3/2/0/1/0                     |                          | <b>6</b> |
| <a href="#">MW-MB-ET-14</a> <sup>9, 24, 43</sup><br><del><a href="#">MW-MB-KST-20</a></del> <sup>9, 24, 43</sup> | Mobile Refrigeration and Special Cooling Tasks<br>- Mobile Refrigeration and Special Refrigeration Tasks                                                 |                          |                          |                          | 3/1/0/1/0 2xPL<br><br>3/1/0/1/0                     |                          | <b>6</b> |
| <a href="#">MW-MB-ET-15</a> <sup>9, 17</sup>                                                                     | Renewable Energy Supply<br>- Consolidation Renewable Energy Systems<br>- Biomass Use                                                                     |                          |                          |                          | 4/1/0/1/0 2xPL<br>2/1/0/0/0<br>2/0/0/1/0            |                          | <b>6</b> |
| <a href="#">MW-MB-ET-16</a> <sup>9</sup>                                                                         | Thermal Process Technology<br>- Operation and Maintenance<br>- Energy Conversion and Processes in the Primary Industry                                   |                          |                          |                          | 4/2/0/0/0 PL<br>2/0/0/0/0<br><br>2/2/0/0/0          |                          | <b>6</b> |
| <a href="#">MW-MB-ET-17</a> <sup>8</sup>                                                                         | Energy Systems Technology<br><del>Storage and Networks (Gas)</del><br><del>Storage and Grids (electricity)</del><br>- Hybrid Systems and Sector Coupling |                          |                          |                          | 4/2/0/0/0 PL<br>1/0/0/0/0<br>1/1/0/0/0<br>2/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-ET-18</a> <sup>9</sup>                                                                         | Applied Molecular Thermodynamics<br>- Applied molecular Thermodynamics                                                                                   |                          |                          |                          | 2/2/0/0/0 PL<br>2/2/0/0/0                           |                          | <b>6</b> |
| <a href="#">MW-MB-ET-19</a> <sup>9, 12, 27, 40</sup>                                                             | Properties and Thermodynamic Simulation<br>- Thermodynamic Material Data/Simulation<br>- Thermomechanical Simulation Methods for Energy Machines         |                          |                          |                          | 4/1/0/1/0 2xPL<br>2/1/0/1/0<br><br>2/0/0/0/0        |                          | <b>6</b> |

| Module no.                                  | Module name                                                                                                                                                                              | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                                | 5 <sup>th</sup> Semester | LP       |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|---------------------------------------------------------|--------------------------|----------|
|                                             |                                                                                                                                                                                          | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                      | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-ET-20<sup>9</sup></a>     | Gas Dynamics and Numerical Fluid Mechanics<br>- Computational Fluid Dynamics<br>- Gas Dynamics                                                                                           |                          |                          |                          | 4/2/0/0/0 PL<br><br>2/1/0/0/0<br>2/1/0/0/0              |                          | <b>6</b> |
| <a href="#">MW-MB-ET-21<sup>9, 17</sup></a> | Nuclear Reactor Engineering<br>- Nuclear reactor Technology<br>- Radioactivity and radiation Protection<br>- Decommissioning of nuclear Facilities                                       |                          |                          |                          | 3/1/0/1/0 2xPL<br>1/1/0/0/0<br>1/0/0/1/0<br>1/0/0/0/0   |                          | <b>6</b> |
| <a href="#">MW-MB-ET-22<sup>9, 81</sup></a> | Reactor Physics<br>- Reactor Physics aspects                                                                                                                                             |                          |                          |                          | 3/1/0/1/0 2xPL<br>3/1/0/1/0                             |                          | <b>6</b> |
| <a href="#">MW-MB-ET-24<sup>9, 11</sup></a> | Machine Laboratory<br>- Higher Metrology in Mechanical Engineering<br>- Machine Inspections                                                                                              |                          |                          |                          | 4/0/0/2/0 PL<br><br>2/0/0/1/0<br>2/0/0/1/0              |                          | <b>6</b> |
| <a href="#">MW-MB-ET-35<sup>9</sup></a>     | European Course of Cryogenics<br>- ECC - European Course of Cryogenics - Cryogenic Fundamentals                                                                                          |                          |                          |                          | 3/2/0/0/0 PL<br><br>3/2/0/0/0                           |                          | <b>6</b> |
| <a href="#">MW-MB-ET-40<sup>8, 9</sup></a>  | Energy Storage and Energy Systems<br>- Electrical Energy Storage<br>- Storage and Networks (Gas)<br>- Control Engineering Problems relating to Energy Storage Systems and Energy Systems |                          |                          |                          | 4/2/0/0/0 PL<br>2/1/0/0/0<br>1/0/0/0/0<br><br>1/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-ET-42<sup>43</sup></a>    | Refrigeration and heat pump technology for mobile applications<br>- Refrigeration and heat pump technology for mobile applications                                                       |                          |                          |                          | 3/1/0/1/0 2xPL<br><br>3/1/0/1/0                         |                          | <b>6</b> |
| <a href="#">MW-MB-ET-44<sup>53</sup></a>    | Thermal Turbines<br>- Steam and Gas Turbines                                                                                                                                             |                          |                          |                          | 4/2/0/0/0 2xPL<br>4/2/0/0/0                             |                          | <b>6</b> |

| Module no.                                                                                                 | Module name                                                                                                                                                  | 1 <sup>st</sup> Semester                                  | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                                                                            |                                                                                                                                                              | V*//Ü*)/S/P/T                                             | V*//Ü*)/S/P/T            | V*//Ü*)/S/P/T<br>(M)     | V*//Ü*)/S/P/T<br>(M)     | V*//Ü*)/S/P/T            |    |
| Field of study Automotive and Railway Vehicle Engineering (KST) <sup>2)</sup>                              |                                                                                                                                                              |                                                           |                          |                          |                          |                          |    |
| Elective modules                                                                                           |                                                                                                                                                              |                                                           |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                                                                    |                                                                                                                                                              |                                                           |                          |                          |                          |                          |    |
| <a href="#">MW-MB-18</a><br><a href="#">4, 9, 36, 70, 75</a>                                               | Measurement and Automation Engineering                                                                                                                       | 2/1/0/1/0 PL<br>(4)                                       | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| <a href="#">MW-MB-19</a><br><a href="#">70, 75</a>                                                         | Extended Fundamentals for Mechanical Engineering                                                                                                             | ##/##/##/##<br>PL <sup>3)</sup>                           |                          |                          |                          |                          | 5  |
| <a href="#">MW-MB-KST-01</a> <a href="#">70, 75</a><br><a href="#">MW-MB-AKM-02</a> <a href="#">70, 75</a> | Fluid Power and Electrical Drive Systems<br>- Basics of Fluid Power Drives and Controls<br>- Electric Drives                                                 | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                    |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-KST-02</a> <a href="#">24, 75</a>                                                        | Fundamentals of Automotive Engineering<br>- Advanced Fundamentals Internal Combustion Engines<br>- Automotive I - Components and Subsystems                  | 3/2/0/1/0 PL<br><br>1/0/0/1/0<br><br>2/2/0/0/0            |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-KST-03</a> <a href="#">52</a>                                                            | Fundamentals of Internal Combustion Engines and Drive Systems<br>- Drive Systems<br>- Fundamentals of Combustion Engines<br>- Design Document Drive Assembly | 4/2/0/0/0 2xPL<br><br>2/0/0/0/0<br>2/0/0/0/0<br>0/2/0/0/0 |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-KST-04</a> <a href="#">87</a>                                                            | Fundamentals of Rail Vehicles<br>- Fundamentals of Rail Vehicle Technology<br>- Basics of Traction Unit Technology                                           | 4/1/0/0/0 PL<br>2/1/0/0/0<br>2/0/0/0/0                    |                          |                          |                          |                          | 7  |

| Module no.                                                                                                                                                         | Module name                                                                                                                                                                             | 1 <sup>st</sup> Semester                                               | 2 <sup>nd</sup> Semester                   | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                                                                                    |                                                                                                                                                                                         | V*/Ü*/S/P/T                                                            | V*/Ü*/S/P/T                                | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-01</a> 17, 23, 24, 32, 70, 75<br><a href="#">MW-MB-KST-28</a> 17, 23, 24, 32, 70, 75<br><a href="#">MW-MB-VTMB-01</a> 17, 23, 24, 32, 70, 75 | Fundamentals of Construction and Dynamic Dimensioning of Machines<br>- Constructive Development Process<br>- Machine Dynamics                                                           | 4/2/0/1/0 2xPL<br><br>2/0/0/1/0<br>2/2/0/0/0                           |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-01</a> 1, 70, 75                                                                                                                              | Production Engineering - Manufacturing Processes<br>- Joining Technology<br>- Surface and Coating Technology<br>- Forming and Remoulding Technology<br>- Cutting and Removal Technology | 4/2/0/0/0 2xPL<br><br>1/0/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0<br>1/1/0/0/0 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-02</a> 54, 70                                                                                                                                 | Production Engineering - Manufacturing and Planning<br>- Occupational Science<br>- Production Planning<br>- Production and Logistics                                                    | 4/1/0/0/0 PL<br><br>1/0/0/0/0<br>2/1/0/0/0<br>1/0/0/0/0                |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LB-03</a> 1, 39, 70, 75                                                                                                                          | Fiber-Reinforced Materials<br>- Fibre Composites<br>- Textile semi-finished Products and Process                                                                                        | 4/1/0/1/0 PL<br>2/1/0/0/0<br>2/0/0/1/0                                 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-KST-05</a>                                                                                                                                       | Construction Materials and Structural Durability<br>- Construction Materials<br>- Operational Strength                                                                                  |                                                                        | 3/1/0/0/0 PL<br><br>2/0/0/0/0<br>1/1/0/0/0 |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-07</a>                                                                                                                                       | Advanced Course: Internal Combustion Engines<br>- Internal Combustion Engine Design<br>- Selected Chapters of Internal Combustion Engines                                               |                                                                        | 4/0/0/0/0 PL<br><br>2/0/0/0/0<br>2/0/0/0/0 |                          |                          |                          | <b>6</b> |

| Module no.                                                                                                                  | Module name                                                                                                                                                                                            | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                                | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                                             |                                                                                                                                                                                                        | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                             | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-KST-11</a>                                                                                                | Electrical Drive and Control Systems<br>- Traction Motors<br>- Rail Vehicle Control Technology                                                                                                         |                          | 6/0/0/0/0 PL<br>4/0/0/0/0<br>2/0/0/0/0                                  |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-12</a>                                                                                                | Diagnostics and Acoustics<br>- Measured Value Processing and Diagnostic Technology<br>- Machine and Vehicle Acoustics                                                                                  |                          | 4/2/0/1/0 PL<br><br>2/1/0/0/0<br>2/1/0/1/0                              |                          |                          |                          | <b>6</b> |
| <del><a href="#">MW-MB-ET-14</a></del> <sup>9, 24, 43</sup><br><del><a href="#">MW-MB-KST-20</a></del> <sup>9, 24, 43</sup> | <del>Mobile Refrigeration and Special Cooling Tasks</del><br><del>Mobile Refrigeration and Special Refrigeration Tasks</del>                                                                           |                          | <del>3/1/0/1/0 2xPL</del><br><br><del>3/1/0/1/0</del>                   |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-06</a>                                                                                                | Connected Mechatronic Systems<br>- Electronic Vehicle Systems and Automated Driving Functions<br>- Laboratory Practical Course in Vehicle Electronics<br>- Networked Systems and Vehicle Communication |                          | 4/0/0/1/0 PL<br><br>2/0/0/0/0<br><br>0/0/0/1/0/<br><br>2/0/0/0/0        |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-KST-08</a> <sup>24</sup>                                                                                  | Full Vehicle Functions in Automotive Engineering<br>- KFZ II - Complete Vehicle Functions<br>- Laboratory Practical Course Automotive Engineering                                                      |                          | 2/0/0/4/0 2xPL<br><br>2/0/0/0/0<br><br>0/0/0/4/0                        |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-KST-09</a> <sup>60, 87</sup>                                                                              | Traction Mechanics<br>- Driving Dynamics<br>- Traction Unit Configurations                                                                                                                             |                          | 4/1/0/1/0 PL<br>2/1/0/0/0<br>2/0/0/1/0                                  |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-KST-10</a> <sup>87</sup>                                                                                  | Supporting Structures of Rail Vehicles<br>- Supporting Structures                                                                                                                                      |                          | 3/1/0/0/0 PL<br>3/1/0/0/0                                               |                          |                          |                          | <b>7</b> |
| <del><a href="#">MW-MB-AKM-09</a></del> <sup>17, 26</sup><br><del><a href="#">MW-MB-KST-29</a></del> <sup>17, 26</sup>      | <del>Tools and Methods of Product Development</del><br><del>Digital MockUp in Product Development</del><br><del>Designing with CAD</del>                                                               |                          | <del>2/4/0/0 2xPL</del><br><del>1/2/0/0/0</del><br><del>1/2/0/0/0</del> |                          |                          |                          | <b>7</b> |

| Module no.                                                                                 | Module name                                                                                                                                                                                | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                   | 3 <sup>rd</sup> Semester                                                 | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------|--------------------------------------------------------------------------|--------------------------|--------------------------|----------|
|                                                                                            |                                                                                                                                                                                            | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                | V*/Ü*/S/P/T<br>(M)                                                       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-KST-32</a> 26, 32, 70, 75<br><a href="#">MW-MB-AKM-37</a> 26, 32, 70, 75 | Methodical Product Development and Selected Tools<br>- Digital MockUp in Product Development<br>- Designing with CAD                                                                       |                          | 2/4/0/0 2xPL<br><br>1/2/0/0/0<br>1/2/0/0/0 |                                                                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-KST-35</a> 43, 85                                                        | Mobile Refrigeration and Heat Pump Technology<br>- Mobile Refrigeration and Heat Pump Technology                                                                                           |                          | 3/0/0/1/0 2xPL<br><br>3/0/0/1/0            |                                                                          |                          |                          | <b>6</b> |
| Choice of 3 out of 8 modules                                                               |                                                                                                                                                                                            |                          |                                            |                                                                          |                          |                          |          |
| <a href="#">MW-MB-KST-21</a> 19, 24, 36 51, 64, 70, 75                                     | Design and Optimization of Vehicle Systems<br>- Energy Management and Operating Strategies for Mobile and Stationary Energy Systems<br>- Design of Mechatronic Systems                     |                          |                                            | 4/1/0/0/0 PL<br><br>2/0/0/0/0<br>2/1/0/0/0                               |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-22</a> 19, 24, 36 51, 64, 70, 75                                     | Simulation Methods in Vehicle Development<br>- Simulation Methods in Vehicle Development and optionally<br>- Internship Vehicle Calculation KFZ or<br>- Internship Vehicle Calculation SFZ |                          |                                            | 2/2/0/2/0 PL<br>2/2/0/0/0<br>and optionally<br>0/0/0/2/0 or<br>0/0/0/2/0 |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-23</a> 19, 24, 36 51, 64, 70, 75                                     | Vehicle Safety<br>- Vehicle Safety of Automated Vehicles<br>- Integral Safety                                                                                                              |                          |                                            | 4/0/0/1/0 PL<br>2/0/0/1/0<br>2/0/0/0/0                                   |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-24</a> 19, 24, 36 51, 64, 70, 75                                     | Motorcycle and Commercial Vehicle Technology<br>- Motorbike Technology<br>- Commercial Vehicle Technology                                                                                  |                          |                                            | 4/0/0/0/0 PL<br><br>2/0/0/0/0<br>2/0/0/0/0                               |                          |                          | <b>6</b> |
| <a href="#">MW-MB-KST-25</a> 18, 19, 24, 35, 36 51, 63, 64, 70, 75, 78, 87                 | Design of Traction Units<br>- Alternative Traction Unit Drives<br>- Driving Dynamics Simulation<br>- Project Work Traction Unit Technology                                                 |                          |                                            | 3/2/0/1/0 2xPL<br>2/0/0/0/0<br>1/1/0/0/0<br>0/1/0/1/0                    |                          |                          | <b>6</b> |

| Module no.                                                                                  | Module name                                                                                                                                              | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                                  | 4 <sup>th</sup> Semester                   | 5 <sup>th</sup> Semester | LP |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-----------------------------------------------------------|--------------------------------------------|--------------------------|----|
|                                                                                             |                                                                                                                                                          | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                                        | V*/Ü*/S/P/T<br>(M)                         | V*/Ü*/S/P/T              |    |
| MW-MB-<br><u>KST-30</u> <sup>18, 35, 50, 63, 78, 95</sup><br>(valid for the WiSe 2026/2027) | Use of the rail vehicles<br>- Use of the rail vehicles                                                                                                   |                          |                          | 3/1/0/0/0 PL<br>3/1/0/0/0                                 |                                            |                          | 6  |
| MW-MB-<br><u>KST-26</u> <sup>19, 24, 36 51, 64, 70, 76</sup>                                | Advanced Course: Rail Vehicles<br>- Selected specialisations in Traction and Rail Vehicle Technology<br>- Maintenance<br>- Local Transport Vehicles      |                          |                          | 6/0/0/0/0 2xPL<br><br>2/0/0/0/0<br>2/0/0/0/0<br>2/0/0/0/0 |                                            |                          | 6  |
| MW-MB-<br><u>KST-27</u> <sup>19, 24, 36 51, 64, 70, 75</sup>                                | Electric Railway Systems<br>- Electric Railways<br>- Project Work Electrical Systems in Railway Vehicles                                                 |                          |                          | 2/1/0/2/0 2xPL<br>2/0/0/1/0<br><br>0/1/0/1/0              |                                            |                          | 6  |
| MW-MB-<br><u>KST-36</u> <sup>56, 69, 87, 88</sup>                                           | Brakes on rail vehicles<br>- Brakes on rail vehicles                                                                                                     |                          |                          | 3/1/0/0,5/0 PL<br>3/1/0/0,5/0                             |                                            |                          | 6  |
| MW-MB-<br><u>KST-37</u> <sup>76</sup>                                                       | Advanced Course: Rail Vehicles Technology<br>- Electric local transport systems<br>- Maintenance of rail vehicles                                        |                          |                          | 4/2/0/0/0 PL<br><br>2/2/0/0/0<br>2/0/0/0/0                |                                            |                          | 6  |
| Choice of 3 out of 7 modules                                                                |                                                                                                                                                          |                          |                          |                                                           |                                            |                          |    |
| MW-MB-<br><u>KST-13</u> <sup>24, 85</sup>                                                   | Dynamics of Vehicle Drives<br>- Dynamics of Vehicle Drives                                                                                               |                          |                          |                                                           | 2/2/0/2/0 PL<br>2/2/0/2/0                  |                          | 6  |
| MW-MB-<br><u>KST-14</u> <sup>24, 85</sup>                                                   | Simulation and Experimental Studies on Internal Combustion Engines<br>- Experimental Studies on Combustion Engines<br>- Simulation of Combustion Engines |                          |                          |                                                           | 2/0/4/0/0 PL<br><br>0/0/4/0/0<br>2/0/0/0/0 |                          | 6  |

| Module no.                                         | Module name                                                                                                                                                                       | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                              | 5 <sup>th</sup> Semester                 | LP |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------------------------|------------------------------------------|----|
|                                                    |                                                                                                                                                                                   | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                    | V*/Ü*/S/P/T                              |    |
| <u>MW-MB-KST-15</u> 24, 85                         | Functional Design in Automotive Engineering<br>- KFZ III - Functional Design<br>- Selected Chapters of Automotive Engineering                                                     |                          |                          |                          | 4/0/0/0/0 PL<br>2/0/0/0/0<br>2/0/0/0/0                |                                          | 6  |
| <u>MW-MB-KST-16</u> 24, 76                         | <del>Operations Safety in Connected, Automated Driving</del><br><del>Vehicle Concepts in Connected, Automated Driving</del><br><del>Human-machine Interaction and Modelling</del> |                          |                          |                          | <del>4/2/0/0/0 PL</del><br><br>2/1/0/0/0<br>2/1/0/0/0 |                                          | 6  |
| <u>MW-MB-KST-17</u> 24, 56                         | <del>Brake Systems and Brake Operation</del><br><del>Braking of the Rail Vehicles</del>                                                                                           |                          |                          |                          | 4/0/0/1/0 PL<br>4/0/0/1/0                             |                                          | 6  |
| <u>MW-MB-KST-18</u> 24, 30, 85, 87, 89             | Running Gears of Rail Vehicles<br>- Running Gears of the Rail Vehicles                                                                                                            |                          |                          |                          | 2/2/0/0/0 PL<br>2/2/0/0/0                             |                                          | 6  |
| <u>MW-MB-KST-19</u> 12, 24, 27, 40, 57, 66, 85, 87 | Rail Vehicle Design<br>- Alternative Rail Vehicle Concepts<br>- Project Work Rail Vehicle Technology                                                                              |                          |                          |                          | 2/1/0/1/0 2xPL<br>2/0/0/0/0<br>0/1/0/1/0              |                                          | 6  |
| <u>MW-MB-KST-33</u> 29, 85                         | Engineering Design - Concept Development of a Formula Student Vehicle<br>- Engineering Design - Concept Development of a Formula Student Vehicle                                  |                          |                          |                          | 0/0/1/3/0 PL<br><br>0/0/1/3/0                         |                                          | 6  |
| <u>MW-MB-KST-36</u> 56, 69, 88                     | <del>Brakes on rail vehicles</del><br><del>Brakes on rail vehicles</del>                                                                                                          |                          |                          |                          | <del>3/1/0/0,5/0 PL</del><br>3/1/0/0,5/0              | <del>3/1/0/0,5/0 PL</del><br>3/1/0/0,5/0 | 6  |
| <u>MW-MB-KST-38</u> 76, 85                         | Vehicle safety in automated driving and expert assessment<br>- Safety of automated vehicles<br>- Expert assessment                                                                |                          |                          |                          | 4/0/0/1/0 PL<br><br>2/0/0/0/0<br>2/0/0/1/0            |                                          | 6  |

| Module no.                                                   | Module name                                                                                                                                 | 1 <sup>st</sup> Semester                                  | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                              |                                                                                                                                             | V*)/Ü*)/S/P/T                                             | V*)/Ü*)/S/P/T            | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T            |    |
| Field of Study Lightweight Engineering (LB) <sup>2)</sup>    |                                                                                                                                             |                                                           |                          |                          |                          |                          |    |
| Elective modules                                             |                                                                                                                                             |                                                           |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                      |                                                                                                                                             |                                                           |                          |                          |                          |                          |    |
| <a href="#">MW-MB-18</a><br><a href="#">4, 9, 36, 70, 75</a> | Measurement and Automation Engineering                                                                                                      | 2/1/0/1/0 PL<br>(4)                                       | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| <a href="#">MW-MB-19</a><br><a href="#">70, 75</a>           | Extended Fundamentals for Mechanical Engineering                                                                                            | ##/##/##/##<br>PL <sup>3)</sup>                           |                          |                          |                          |                          | 5  |
| <a href="#">MW-MB-LB-01</a><br><a href="#">36, 70, 75</a>    | Fundamentals of Lightweight Engineering<br>- Basic Features of Lightweight Construction<br>- Machine Dynamics                               | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                    |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-02</a><br><a href="#">70, 75, 79</a>    | Lightweight Materials<br>- Fundamentals of Polymer Materials<br>- Plastics Testing<br>- Non-ferrous Metals, Ceramics, Natural Materials     | 5/0/0/1/0 2xPL<br>2/0/0/0/0<br>1/0/0/1/0<br><br>2/0/0/0/0 |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-03</a><br><a href="#">1, 39, 70, 75</a> | Fiber-Reinforced Materials<br>- Fibre Composites<br>- Textile semi-finished Products and Process                                            | 4/1/0/1/0 PL<br>2/1/0/0/0<br>2/0/0/1/0                    |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-PT-02</a><br><a href="#">54, 70</a>        | Production Engineering - Manufacturing and Planning<br>- Occupational Science<br>- Production Planning<br>- Production and Logistics        | 4/1/0/0/0 PL<br><br>1/0/0/0/0<br>2/1/0/0/0<br>1/0/0/0/0   |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-KST-02</a><br><a href="#">24, 75</a>       | Fundamentals of Automotive Engineering<br>- Advanced Fundamentals Internal Combustion Engines<br>- Automotive I - Components and Subsystems | 3/2/0/1/0 PL<br><br>1/0/0/1/0<br><br>2/2/0/0/0            |                          |                          |                          |                          | 7  |

| Module no.                                                                            | Module name                                                                                                   | 1 <sup>st</sup> Semester               | 2 <sup>nd</sup> Semester                     | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                       |                                                                                                               | V*/Ü*/S/P/T                            | V*/Ü*/S/P/T                                  | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-LRT-02</a> <sup>17, 64</sup>                                        | Fundamentals of Aerospace Vehicles<br>- Aircraft Design<br>- Space Systems                                    | 4/3/0/0/0 PL<br>2/2/0/0/0<br>2/1/0/0/0 |                                              |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LB-05</a> <sup>39</sup>                                             | Fiber Composites Technology<br>- Fiber Composites Technology<br>- Connection Techniques                       |                                        | 3/2/0/0/0 PL<br>1/1/0/0/0<br>2/1/0/0/0       |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-07</a> <sup>46, 79</sup>                                         | Development of Lightweight Structures<br>- Lightweight Construction Exercise<br>- Lightweight Construction    |                                        | 2/2/0/0/0 PL<br>0/2/0/0/0<br>2/0/0/0/0       |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-11</a> <sup>1</sup><br><a href="#">MW-MB-LRT-09</a> <sup>1</sup> | Vibration Technology and Structural Durability<br>- Operational Strength<br>- Vibration Technology            |                                        | 3/2/0/0/0 PL<br><br>1/1/0/0/0<br>2/1/0/0/0   |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-12</a>                                                           | Continuum Mechanics and Structural Analysis<br>- Continuum Mechanics<br>- Beam and Shell Structures           |                                        | 4/1/0/0/0 2xPL<br><br>2/1/0/0/0<br>2/0/0/0/0 |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-13</a>                                                           | Construction Materials and Surface Engineering<br>- Construction Materials<br>- Surface Technology            |                                        | 4/1/0/0/0 PL<br><br>2/0/0/0/0<br>2/1/0/0/0   |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-14</a> <sup>34</sup>                                             | Function-Integrated Components<br>- Lightweight Mechanisms<br>- Multifunctional Structures                    |                                        | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0       |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-04</a>                                                           | Calculation of Lightweight Structures<br>- Calculation of Lightweight Structures 1<br>- Simulation Technology |                                        | 3/1/0/2/0 PL<br>2/1/0/0/0<br>1/0/0/2/0       |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LB-06</a> <sup>79</sup>                                             | Fundamentals of Polymer Technology<br>- Plastics Technology<br>- Plastics Processing                          |                                        | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0       |                          |                          |                          | <b>7</b> |

| Module no.                                                                                              | Module name                                                                                                                           | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                           | 3 <sup>rd</sup> Semester                   | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------|--------------------------------------------|--------------------------|--------------------------|----------|
|                                                                                                         |                                                                                                                                       | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                        | V*/Ü*/S/P/T<br>(M)                         | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-LB-24</a> <sup>34, 79, 85</sup><br><a href="#">MW-MB-LRT-36</a> <sup>34, 79, 85</sup> | - Multifunctional Structures and Function-Integrated Components<br>- Lightweight Mechanisms<br>- Multifunctional Structures           |                          | 4/2/0/0/0 PL<br><br>2/1/0/0/0<br>2/1/0/0/0                         |                                            |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-05</a> <sup>31, 46, 70, 75</sup>                                                   | Additive Manufacturing<br>- Additive Manufacturing                                                                                    |                          | 4/2/0/0/0 2xPL<br>4/2/0/0                                          |                                            |                          |                          | <b>7</b> |
| <a href="#">MW-MB-VTMB-32</a> <sup>16</sup>                                                             | <del>Mechanism Synthesis and Multi-Body Simulation</del><br><del>- Mechanism Synthesis</del><br>- Multibody Systems                   |                          | <del>4/3/0/0/0 2xPL</del><br><br><del>2/1/0/0/0</del><br>2/2/0/0/0 |                                            |                          |                          | <b>7</b> |
| <a href="#">MW-MB-VTMB-35</a> <sup>16</sup>                                                             | Multi-Body Dynamics and Mechanism Synthesis<br>- Mechanism Synthesis<br>- Multibody Systems                                           |                          | 4/3/0/0/0 PL<br><br>2/1/0/0/0<br>2/2/0/0/0                         |                                            |                          |                          | <b>7</b> |
| Choice of 3 out of 6 modules                                                                            |                                                                                                                                       |                          |                                                                    |                                            |                          |                          |          |
| <a href="#">MW-MB-LB-15</a>                                                                             | Calculation and Design with Fiber Composites<br>- Calculation of Fibre Composite Structures 2<br>- Designing with Fibre Composites 2  |                          |                                                                    | 3/2/0/0/0 PL<br>2/1/0/0/0<br>1/1/0/0/0     |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-16</a> <sup>39</sup><br><a href="#">MW-MB-VTMB-29</a> <sup>39</sup>                | Manufacturing of Fiber Composite Structures<br>- Technologies for Thermoset Composites<br>- Technologies for Thermoplastic Composites |                          |                                                                    | 3/2/0/0/0 PL<br>2/1/0/0/0<br><br>1/1/0/0/0 |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-17</a> <sup>37, 79</sup><br><a href="#">MW-MB-VTMB-28</a> <sup>37, 79</sup>        | Adaptive Structures for Lightweight Design<br>- Active Compliant Structures<br>- Function-integrative Lightweight Structures          |                          |                                                                    | 3/2/0/0/0 PL<br><br>1/1/0/0/0<br>2/1/0/0/0 |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LB-18</a> <sup>79</sup>                                                               | Quality Assurance Management<br>- Process Analysis<br>- Quality Assurance                                                             |                          |                                                                    | 4/1/0/0/0 PL<br>2/0/0/0/0<br>2/1/0/0/0     |                          |                          | <b>6</b> |

| Module no.                                                                            | Module name                                                                                                                          | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester               | 4 <sup>th</sup> Semester                   | 5 <sup>th</sup> Semester | LP       |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------------------|--------------------------------------------|--------------------------|----------|
|                                                                                       |                                                                                                                                      | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                     | V*/Ü*/S/P/T<br>(M)                         | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-LB-19</a>                                                           | Damage and Fatigue of Fiber Composites<br>- Fatigue in Fibre Composites<br>- Damage in Fibre Composites                              |                          |                          | 3/2/0/0/0 PL<br>1/1/0/0/0<br>2/1/0/0/0 |                                            |                          | <b>6</b> |
| <a href="#">MW-MB-LB-20</a> <sup>79</sup>                                             | Designing with Polymers<br>- Design Suitable for Plastics<br>- Special Problems in Plastics Technology                               |                          |                          | 4/1/0/0/0 PL<br>2/1/0/0/0<br>2/0/0/0/0 |                                            |                          | <b>6</b> |
| Selection of 3, not already chosen modules, from 9 modules                            |                                                                                                                                      |                          |                          |                                        |                                            |                          |          |
| <a href="#">MW-MB-LB-08</a>                                                           | Dimensioning of Lightweight Structures<br>- Calculation of Composite Fibre Structures 1<br>- Calculation of Lightweight Structures 2 |                          |                          |                                        | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0     |                          | <b>6</b> |
| <a href="#">MW-MB-LB-09</a> <sup>79</sup>                                             | Design of Lightweight Structures<br>- Designing with Fibre Composites 1<br>- Design of Lightweight Structures                        |                          |                          |                                        | 4/1/0/0/0 PL<br>2/1/0/0/0<br>2/0/0/0/0     |                          | <b>6</b> |
| <a href="#">MW-MB-LB-10</a> <sup>39</sup>                                             | Polymer Technologies<br>- Process Design of Plastics Processing<br>- Tool Design                                                     |                          |                          |                                        | 3/2/0/0/0 PL<br>2/1/0/0/0<br>1/1/0/0/0     |                          | <b>6</b> |
| <a href="#">MW-MB-LB-11</a> <sup>1</sup><br><a href="#">MW-MB-LRT-09</a> <sup>1</sup> | Vibration Technology and Structural Durability<br>- Operational Strength<br>- Vibration Technology                                   |                          |                          |                                        | 3/2/0/0/0 PL<br><br>1/1/0/0/0<br>2/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-LB-12</a>                                                           | Continuum Mechanics and Structural Analysis<br>- Continuum Mechanics<br>- Beam and Shell Structures                                  |                          |                          |                                        | 4/1/0/0/0 2xPL<br>2/1/0/0/0<br>2/0/0/0/0   |                          | <b>6</b> |
| <a href="#">MW-MB-LB-13</a>                                                           | Construction Materials and Surface Engineering<br>- Construction Materials<br>- Surface Technology                                   |                          |                          |                                        | 4/1/0/0/0 PL<br><br>2/0/0/0/0<br>2/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-LB-14</a> <sup>34</sup>                                             | Function-Integrated Components<br>- Lightweight Mechanisms<br>- Multifunctional Structures                                           |                          |                          |                                        | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0     |                          | <b>6</b> |

| Module no.                                                                        | Module name                                                                                                                                                                                                                                                                                                   | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                                                                               | 5 <sup>th</sup> Semester | LP       |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------|--------------------------|----------|
|                                                                                   |                                                                                                                                                                                                                                                                                                               | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                                                                     | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-LB-21</a> 39, 79                                                | Special Problems of Lightweight Engineering<br>- FEM in Multi-material Design<br>- Function-integrative Lightweight Construction<br>- FVM and Plastics in Medical Technology<br>- Lightweight Construction through Bionics                                                                                    |                          |                          |                          | 0/4/0/0/0 PL<br>0/2/0/0/0<br>0/2/0/0/0<br><br>0/2/0/0/0<br>0/2/0/0/0                                   |                          | <b>6</b> |
| <a href="#">MW-MB-LB-23</a>                                                       | Lightweight Structures and Technologies for Selected Industries<br>Selection of 1 from 4 contents<br>- Aircraft Design (MW-MB-LRT-06)<br>- Fracture Criteria and Fracture Mechanics (MW-MB-LRT-12)<br>- Aircraft Manufacturing (MW-MB-LRT-16)<br>- Functional Design in Automotive Engineering (MW-MB-KST-15) |                          |                          |                          | #/#/#/#/# PL <sup>4)</sup><br><br>2/3/0/0 2xPL<br><br>2/2/0/0/0 PL<br>4/1/0/0/0 PL<br><br>4/0/0/0/0 PL |                          | <b>6</b> |
| <a href="#">MW-MB-LB-24</a> 34, 79, 85<br><a href="#">MW-MB-LRT-36</a> 34, 79, 85 | - Multifunctional Structures and Function-Integrated Components<br>- Lightweight Mechanisms<br>- Multifunctional Structures                                                                                                                                                                                   |                          |                          |                          | 4/2/0/0/0 PL<br><br>2/1/0/0/0<br>2/1/0/0/0                                                             |                          | <b>6</b> |

| Module no.                                                                                                                                                                                          | Module name                                                                                                                   | 1 <sup>st</sup> Semester                     | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                                                                                                                                                                     |                                                                                                                               | V*)/Ü*)/S/P/T                                | V*)/Ü*)/S/P/T            | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T            |    |
| Field of study Aerospace Engineering (LRT) <sup>2)</sup>                                                                                                                                            |                                                                                                                               |                                              |                          |                          |                          |                          |    |
| Elective modules                                                                                                                                                                                    |                                                                                                                               |                                              |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                                                                                                                                                             |                                                                                                                               |                                              |                          |                          |                          |                          |    |
| <a href="#">MW-MB-18</a><br><a href="#">4, 9, 36, 70, 75</a>                                                                                                                                        | Measurement and Automation Engineering                                                                                        | 2/1/0/1/0 PL<br>(4)                          | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| <a href="#">MW-MB-19</a><br><a href="#">70, 75</a>                                                                                                                                                  | Extended Fundamentals for Mechanical Engineering                                                                              | ##/##/##/##<br>PL <sup>3)</sup>              |                          |                          |                          |                          | 5  |
| <a href="#">MW-MB-LRT-01</a> <sup>9</sup>                                                                                                                                                           | Fundamentals of Aerodynamics and Flight Mechanics<br>- Aerodynamics 1<br>- Fundamentals of Flight Mechanics                   | 4/3/0/0/0 PL<br><br>2/2/0/0/0<br>2/1/0/0/0   |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LRT-02</a> <sup>17, 64</sup>                                                                                                                                                      | Fundamentals of Aerospace Vehicles<br>- Aircraft Design<br>- Space Systems                                                    | 4/3/0/0/0 PL<br>2/2/0/0/0<br>2/1/0/0/0       |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LRT-03</a> <sup>75</sup>                                                                                                                                                          | Fundamentals of Aerospace Engineering<br>- Aerospace Materials<br>- Fluid Mechanics Fundamentals of Turbomachinery            | 4/2/0/0/0 PL<br>2/0/0/0/0<br><br>2/2/0/0/0   |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-01</a> <sup>17, 23, 24, 32, 70, 75</sup><br><a href="#">MW-MB-KST-28</a> <sup>17, 23, 24, 32, 70, 75</sup><br><a href="#">MW-MB-VTMB-01</a> <sup>17, 23, 24, 32, 70, 75</sup> | Fundamentals of Construction and Dynamic Dimensioning of Machines<br>- Constructive Development Process<br>- Machine Dynamics | 4/2/0/1/0 2xPL<br><br>2/0/0/1/0<br>2/2/0/0/0 |                          |                          |                          |                          | 7  |

| Module no.                                                                                       | Module name                                                                                                                                                                             | 1 <sup>st</sup> Semester                                               | 2 <sup>nd</sup> Semester                   | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                  |                                                                                                                                                                                         | V*/Ü*/S/P/T                                                            | V*/Ü*/S/P/T                                | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-02</a> <sup>70, 75</sup><br><a href="#">MW-MB-KST-01</a> <sup>70, 75</sup> | Fluid Power and Electrical Drive Systems<br>- Basics of Fluid Power Drives and Controls<br>- Electric Drives                                                                            | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                                 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-ET-02</a> <sup>1, 9, 54</sup>                                                  | Process Thermodynamics<br>- Process Thermodynamics<br>- Reaction Process Engineering                                                                                                    | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                                 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-ET-03</a> <sup>1, 42</sup>                                                     | Fundamentals of Heat and Mass Transfer<br>- Combustion Technology<br>- Heat and Mass Transfer                                                                                           | 4/3/0/0/0 PL<br>2/1/0/0/0<br>2/2/0/0/0                                 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LB-01</a> <sup>36, 70, 75</sup>                                                | Fundamentals of Lightweight Engineering<br>- Basic Features of Lightweight Construction<br>- Machine Dynamics                                                                           | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                                 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-01</a> <sup>1, 70, 75</sup>                                                 | Production Engineering - Manufacturing Processes<br>- Joining Technology<br>- Surface and Coating Technology<br>- Forming and Remoulding Technology<br>- Cutting and Removal Technology | 4/2/0/0/0 2xPL<br><br>1/0/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0<br>1/1/0/0/0 |                                            |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LRT-06</a> <sup>17, 46</sup>                                                   | Aircraft Design<br>- Aircraft Design 1<br>- Numerical Tools for Aircraft Design                                                                                                         |                                                                        | 2/3/0/0/0 2xPL<br>2/1/0/0/0<br>0/2/0/0/0   |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-07</a>                                                                     | Space Technology<br>- Basics of Space Propulsion<br>- Satellite Technology                                                                                                              |                                                                        | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0     |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-08</a>                                                                     | Turbomachines for Flight Propulsion<br>- Turbomachinery Theory                                                                                                                          |                                                                        | 2/2/0/0/0 PL<br>2/2/0/0/0                  |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-09</a> <sup>1</sup><br><a href="#">MW-MB-LB-11</a> <sup>1</sup>            | Vibration Technology and Structural Durability<br>- Operational Strength<br>- Vibration Technology                                                                                      |                                                                        | 3/2/0/0/0 PL<br><br>1/1/0/0/0<br>2/1/0/0/0 |                          |                          |                          | <b>6</b> |

| Module no.                                                                                                       | Module name                                                                                                                       | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                                   | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                                  |                                                                                                                                   | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                                | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-18</a> <sup>17, 25, 32, 46</sup><br><a href="#">MW-MB-SIM-10</a> <sup>17, 25, 32, 46</sup> | Virtual Methods and Tools<br>- Reverse Engineering and optionally<br>- Free-form Modelling or<br>- Hybrid Modelling               |                          | 2/1/0/2/0 2xPL<br>1/1/0/0/0<br>and optionally<br>1/0/0/2/0 or<br>1/0/0/2/0 |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-04</a>                                                                                     | Fundamentals of Flight Propulsion<br>- Gas Dynamics<br>- Aircraft Propulsion 1                                                    |                          | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                                     |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LRT-05</a>                                                                                     | Numerical Methods of Fluid Mechanics and Structural Mechanics<br>- Finite Element Method<br>- Computational Fluid Dynamics        |                          | 4/1/0/2/0 PVL,<br>PL<br>2/0/0/1/0<br>2/1/0/1/0                             |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-05</a> <sup>31, 46, 70, 75</sup>                                                            | Additive Manufacturing<br>- Additive Manufacturing                                                                                |                          | 4/2/0/0/0 2xPL<br>4/2/0/0/0                                                |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-AKM-09</a> <sup>17, 26</sup><br><a href="#">MW-MB-KST-29</a> <sup>17, 26</sup>                 | <del>Tools and Methods of Product Development</del><br><del>- Digital MockUp in Product Development</del><br>- Designing with CAD |                          | <del>2/4/0/0/0 2xPL</del><br><del>1/2/0/0/0</del><br><del>1/2/0/0/0</del>  |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-AKM-37</a> <sup>26, 32, 70, 75</sup><br><a href="#">MW-MB-KST-32</a> <sup>26, 32, 70, 75</sup> | Methodical Product Development and Selected Tools<br>- Digital MockUp in Product Development<br>- Designing with CAD              |                          | 2/4/0/0/0 2xPL<br><br>1/2/0/0/0<br>1/2/0/0/0                               |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-07</a> <sup>8</sup>                                                                         | Industrial Engineering<br><del>- Work Organisation</del><br>- Ergonomics                                                          |                          | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0                                   |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-32</a> <sup>8, 53</sup>                                                                     | Industrial Engineering and Ergonomics<br><del>- Work Organisation</del><br><del>- Ergonomics</del>                                |                          | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0                                   |                          |                          |                          | <b>7</b> |

| Module no.                                                             | Module name                                                                                                                | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                     | 3 <sup>rd</sup> Semester                              | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------|-------------------------------------------------------|--------------------------|--------------------------|----------|
|                                                                        |                                                                                                                            | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                  | V*/Ü*/S/P/T<br>(M)                                    | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <u>MW-MB-PT-34</u> 53, 70, 75, 82                                      | Ergonomics and Industrial Engineering<br>- Work Organisation<br>- Ergonomics                                               |                          | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0     |                                                       |                          |                          | <b>7</b> |
| <u>MW-MB-PT-39</u> 82, 87, 87                                          | Process Ergonomics and Industrial Engineering<br>- Work Organisation<br>- Ergonomics                                       |                          | 4/1/0/0/0 2xPL<br><br>2/1/0/0/0<br>2/0/0/0/0 |                                                       |                          |                          | <b>7</b> |
| Choice of 3 out of 11 modules                                          |                                                                                                                            |                          |                                              |                                                       |                          |                          |          |
| <u>MW-MB-LRT-24</u> 9, 17, 46, 75<br><u>MW-MB-SIM-22</u> 9, 17, 46, 75 | Aeroelastics<br>- Basics of Aeroelasticity<br>- Aeroelasticity Design Project<br>- Structure-flow Coupling                 |                          |                                              | 4/1/0/0/0 2xPL<br>2/0/0/0/0<br>0/1/0/0/0<br>2/0/0/0/0 |                          |                          | <b>6</b> |
| <u>MW-MB-LRT-25</u> 9, 75                                              | Communication Navigation Surveillance (CNS)<br>- Communication Surveillance<br>- Navigation                                |                          |                                              | 4/0/0/0/1 PL<br><br>2/0/0/0/1<br>2/0/0/0/0            |                          |                          | <b>6</b> |
| <u>MW-MB-LRT-26</u> 9, 75                                              | Probabilistics and Robust Design<br>- Probabilistic and Robust Design                                                      |                          |                                              | 3/2/0/0/0 PL<br>3/2/0/0/0                             |                          |                          | <b>6</b> |
| <u>MW-MB-LRT-27</u> 9, 46, 75<br><u>MW-MB-SIM-20</u> 9, 46, 75         | Simulation Technology in Fluid Mechanics<br>- Advanced Computational Fluid Dynamics<br>- Flow Simulation on Supercomputers |                          |                                              | 3/1/0/1/0 2xPL<br>2/1/0/0/0<br>1/0/0/1/0              |                          |                          | <b>6</b> |
| <u>MW-MB-LRT-28</u> 9, 75                                              | Aircraft Maintenance<br>- Basics of Aircraft Maintenance<br>- Repair Technologies for Aircraft Structures                  |                          |                                              | 4/1/0/0/0 PL<br>2/0/0/0/0<br>2/1/0/0/0                |                          |                          | <b>6</b> |
| <u>MW-MB-LRT-29</u> 9, 17, 75                                          | Aircraft Systems<br>- Introduction to Aircraft Systems<br>- Aircraft Hydraulics                                            |                          |                                              | 3/2/0/0/0 PL<br>2/1/0/0/0<br>1/1/0/0/0                |                          |                          | <b>6</b> |

| Module no.                                                                    | Module name                                                                                                                                                             | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                                                  | 4 <sup>th</sup> Semester                 | 5 <sup>th</sup> Semester | LP |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------|------------------------------------------|--------------------------|----|
|                                                                               |                                                                                                                                                                         | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                                                        | V*/Ü*/S/P/T<br>(M)                       | V*/Ü*/S/P/T              |    |
| <a href="#">MW-MB-LRT-30</a> 9, 46, 75                                        | Space and Science<br>- Design of Scientific Space Experiments<br>- Seminar Space and Science                                                                            |                          |                          | 3/2/0/0/0 2xPL<br>1/1/0/0/0<br>2/1/0/0/0                                  |                                          |                          | 6  |
| <a href="#">MW-MB-LRT-31</a> 9, 75                                            | Energy Supply in Space<br>- Power Systems for Spacecraft<br>- Space Electronics and Software                                                                            |                          |                          | 3/1/0/0/0 PL<br>2/1/0/0/0<br>1/0/0/0/0                                    |                                          |                          | 6  |
| <a href="#">MW-MB-LRT-32</a> 9, 46, 74                                        | <del>Design of Jet Engines</del><br><del>Jet Engine Design</del><br><del>Design Project ZTL</del>                                                                       |                          |                          | <del>2/2/0/0/0 2xPL</del><br><del>2/1/0/0/0</del><br><del>0/1/0/0/0</del> |                                          |                          | 6  |
| <a href="#">MW-MB-LRT-33</a> 1, 9, 75<br><a href="#">MW-MB-ET-23</a> 1, 9, 75 | Turbocompressors<br>- Turbocompressor                                                                                                                                   |                          |                          | 2/2/0/0/0 PL<br>2/2/0/0/0                                                 |                                          |                          | 6  |
| <a href="#">MW-MB-LRT-34</a> 9, 46, 62                                        | Fundamentals of Flight Operations within the Modern Cockpit<br><del>Air Traffic Facilities, Operations and Air Traffic Control</del><br><del>Cockpit Technologies</del> |                          |                          | 4/1/0/0/0 2xPL<br><br>2/0/0/0/0<br>2/1/0/0/0                              |                                          |                          | 6  |
| <a href="#">MW-MB-LRT-35</a> 14, 46, 75                                       | Optimal and Robust Flight Control<br>- Optimal and Robust Flight Control                                                                                                |                          |                          | 3/2/0/0/0 2xPL<br>3/2/0/0/0                                               |                                          |                          | 6  |
| <a href="#">MW-MB-LRT-37</a> 62, 75                                           | Fundamentals of Flight Planning and Flight Operations<br>- Cockpit Technologies<br>- Flight Planning<br>- Aeronautical meteorology                                      |                          |                          | 4/1/0/0/1 PL<br><br>2/1/0/0/1<br>1/0/0/0/0<br>1/0/0/0/0                   |                                          |                          | 6  |
| Choice of 3 out of 13 modules                                                 |                                                                                                                                                                         |                          |                          |                                                                           |                                          |                          |    |
| <a href="#">MW-MB-LRT-10</a> 17, 46, 85                                       | Design of Innovative Aerospace Structures<br>- Design of Composite Aerospace Vehicles<br>- Design Project Aerospace Structures                                          |                          |                          |                                                                           | 2/3/0/0/0 2xPL<br>2/2/0/0/0<br>0/1/0/0/0 |                          | 6  |

| Module no.                                                                               | Module name                                                                                                                                | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                              | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------------------------|--------------------------|----------|
|                                                                                          |                                                                                                                                            | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                    | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-LRT-11</a> <sup>34</sup>                                               | Multifunctional Structures and Components<br>- Lightweight Mechanisms<br>- Multifunctional Structures                                      |                          |                          |                          | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-12</a> <sup>85</sup><br><a href="#">MW-MB-SIM-11</a> <sup>85</sup> | Fracture Criteria and Fracture Mechanics<br>- Fracture Criteria and Fracture Mechanics                                                     |                          |                          |                          | 2/2/0/0/0 PL<br>2/2/0/0/0                             |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-13</a> <sup>12, 17, 46, 85</sup>                                   | Interdisciplinary Design Project Aerospace Engineering<br>- Interdisciplinary Design Project Aerospace Engineering                         |                          |                          |                          | 0/2/0/2/0 PL<br><br>0/2/0/2/0                         |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-14</a> <sup>17, 46, 66, 85</sup>                                   | Aircraft Structures<br>- Aircraft Design Project<br>- Aircraft Design 2                                                                    |                          |                          |                          | 2/3/0/0/0 2xPL<br>0/2/0/0/0<br>2/1/0/0/0              |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-15</a> <sup>46, 85, 87</sup>                                       | Aerodynamics of Aircraft<br>- Aerodynamics 2<br>- Flow Practical Course                                                                    |                          |                          |                          | 2/2/0/1/0 2xPL<br>2/1/0/0/0<br>0/1/0/1/0              |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-16</a> <sup>85</sup>                                               | Aircraft Manufacturing<br>- Introduction to Aircraft Production<br>- Special Manufacturing Processes                                       |                          |                          |                          | 4/1/0/0/0 PL<br>2/1/0/0/0<br>2/0/0/0/0                |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-17</a> <sup>17, 85</sup>                                           | Flight Dynamics and Control<br>- Flight Dynamics<br>- Flight Control                                                                       |                          |                          |                          | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-18</a> <sup>32, 46, 85</sup>                                       | Space Mission Design<br>- Orbital Mechanics and Mission Planning<br>- Spacecraft Attitude Control Systems<br>- Mission Planning and Design |                          |                          |                          | 4/1/0/0/0 2xPL<br>2/0/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-19</a> <sup>85</sup>                                               | Space Propulsion<br>- Electric Space Propulsion and Future Concepts<br>- Support Systems                                                   |                          |                          |                          | 4/1/0/0/0 PL<br><br>2/1/0/0/0<br>2/0/0/0/0            |                          | <b>6</b> |

| Module no.                                                                                              | Module name                                                                                                                            | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                                | 5 <sup>th</sup> Semester | LP       |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|---------------------------------------------------------|--------------------------|----------|
|                                                                                                         |                                                                                                                                        | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                      | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-LRT-20</a> <sup>38, 85</sup>                                                          | Space Environment<br>- Astronautics and Life Support Systems<br>- Interplanetary Space Travel<br>- Space Environment and Space Weather |                          |                          |                          | 5/0/0/0/0 PL<br><br>1/0/0/0/0<br>2/0/0/0/0<br>2/0/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-21</a> <sup>85</sup>                                                              | Technology of Flight Propulsion<br>- Aircraft Propulsion 2                                                                             |                          |                          |                          | 2/2/0/0/0 PL<br>2/2/0/0/0                               |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-22</a> <sup>84</sup>                                                              | <del>Thermofluidynamics</del><br><del>Thermofluid Dynamics</del>                                                                       |                          |                          |                          | <del>2/2/0/0/0 PL</del><br><del>2/2/0/0/0</del>         |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-23</a> <sup>85</sup><br><a href="#">MW-MB-SIM-14</a> <sup>85</sup>                | Turbulent Flows and their Modelling<br>- Turbulent Flows and their Modelling                                                           |                          |                          |                          | 2/2/0/1/0 PL<br>2/2/0/1/0                               |                          | <b>6</b> |
| <a href="#">MW-MB-LRT-36</a> <sup>34, 79, 85</sup><br><a href="#">MW-MB-LB-24</a> <sup>34, 79, 85</sup> | Multifunctional Structures and Function-Integrated Components<br>- Lightweight Mechanisms<br>- Multifunctional Structures              |                          |                          |                          | 4/2/0/0/0 PL<br><br>2/1/0/0/0<br>2/1/0/0/0              |                          | <b>6</b> |

| Module no.                                                   | Module name                                                                                                                                                                             | 1 <sup>st</sup> Semester                                               | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                              |                                                                                                                                                                                         | V*)/Ü*)/S/P/T                                                          | V*)/Ü*)/S/P/T            | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T            |    |
| Field of study Production Engineering (PT) <sup>2)</sup>     |                                                                                                                                                                                         |                                                                        |                          |                          |                          |                          |    |
| Elective modules                                             |                                                                                                                                                                                         |                                                                        |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                      |                                                                                                                                                                                         |                                                                        |                          |                          |                          |                          |    |
| <a href="#">MW-MB-18</a><br><a href="#">4, 9, 36, 70, 75</a> | Measurement and Automation Engineering                                                                                                                                                  | 2/1/0/1/0 PL<br>(4)                                                    | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| <a href="#">MW-MB-19</a><br><a href="#">70, 75</a>           | Extended Fundamentals for Mechanical Engineering                                                                                                                                        | ##/##/##/##<br>PL <sup>3)</sup>                                        |                          |                          |                          |                          | 5  |
| <a href="#">MW-MB-PT-01</a> <a href="#">1, 70, 75</a>        | Production Engineering - Manufacturing Processes<br>- Joining Technology<br>- Surface and Coating Technology<br>- Forming and Remoulding Technology<br>- Cutting and Removal Technology | 4/2/0/0/0 2xPL<br><br>1/0/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0<br>1/1/0/0/0 |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-PT-02</a> <a href="#">54, 70</a>           | Production Engineering - Manufacturing and Planning<br>- Occupational Science<br>- Production Planning<br>- Production and Logistics                                                    | 4/1/0/0/0 PL<br><br>1/0/0/0/0<br>2/1/0/0/0<br>1/0/0/0/0                |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-PT-03</a> <a href="#">70, 75</a>           | Production Engineering - Machine Tools and Production Automatization<br>- Production Automation<br>- Machine Tools - Basics                                                             | 4/2/0/0/0 PL<br><br>2/1/0/0/0<br>2/1/0/0/0                             |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-01</a> <a href="#">36, 70, 75</a>       | Fundamentals of Lightweight Engineering<br>- Basic Features of Lightweight Construction<br>- Machine Dynamics                                                                           | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                                 |                          |                          |                          |                          | 7  |

| Module no.                                                                                                                                                                                                         | Module name                                                                                                                                            | 1 <sup>st</sup> Semester                                  | 2 <sup>nd</sup> Semester                 | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                                                                                                                                    |                                                                                                                                                        | V*/Ü*/S/P/T                                               | V*/Ü*/S/P/T                              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-LB-02</a> <a href="#">70, 75, 79</a>                                                                                                                                                             | Lightweight Materials<br>- Fundamentals of Polymer Materials<br>- Plastics Testing<br>- Non-ferrous Metals, Ceramics, Natural Materials                | 5/0/0/1/0 2xPL<br>2/0/0/0/0<br>1/0/0/1/0<br><br>2/0/0/0/0 |                                          |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LB-03</a> <a href="#">1, 39, 70, 75</a>                                                                                                                                                          | Fiber-Reinforced Materials<br>- Fibre Composites<br>- Textile semi-finished Products and Process                                                       | 4/1/0/1/0 PL<br>2/1/0/0/0<br>2/0/0/1/0                    |                                          |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-AKM-01</a> <a href="#">17, 23, 24, 32, 70, 75</a><br><a href="#">MW-MB-KST-28</a> <a href="#">17, 23, 24, 32, 70, 75</a><br><a href="#">MW-MB-VTMB-01</a> <a href="#">17, 23, 24, 32, 70, 75</a> | Fundamentals of Construction and Dynamic Dimensioning of Machines<br>- Constructive Development Process<br>- Machine Dynamics                          | 4/2/0/1/0 2xPL<br><br>2/0/0/1/0<br>2/2/0/0/0              |                                          |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-AKM-02</a> <a href="#">70, 75</a><br><a href="#">MW-MB-KST-01</a> <a href="#">70, 75</a>                                                                                                         | Fluid Power and Electrical Drive Systems<br>- Basics of Fluid Power Drives and Controls<br>- Electric Drives                                           | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                    |                                          |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-AKM-03</a> <a href="#">70, 75</a>                                                                                                                                                                | Mechanical Drives<br>- Drive Elements<br>- Design Document Drive Assembly                                                                              | 2/3/0/0/0 2xPL<br>2/1/0/0/0<br>0/2/0/0/0                  |                                          |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-08</a> <a href="#">47, 53</a>                                                                                                                                                                 | <del>Production Planning – Advanced Course</del><br><del>– Production Planning – Assembly</del><br><del>– Production Planning – Parts Production</del> |                                                           | 2/2/0/0/0 2xPL<br>1/1/0/0/0<br>1/1/0/0/0 |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-09</a> <a href="#">1, 46, 70, 76</a>                                                                                                                                                          | <del>Laser and Plasma Technology</del><br><del>– Laser Technology</del><br><del>– Plasma Technology</del>                                              |                                                           | 3/2/0/0/0 2xPL<br>2/1/0/0/0<br>1/1/0/0/0 |                          |                          |                          | <b>6</b> |

| Module no.                                | Module name                                                                                                                                                         | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                         | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----|
|                                           |                                                                                                                                                                     | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                      | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |    |
| <u>MW-MB-PT-10</u> 70, 75                 | Production Measurement Technology<br>- Higher Metrology in Mechanical Engineering<br>- Coordinate Measuring Technology                                              |                          | 4/0/0/2/0 PL<br><br>2/0/0/1/0<br>2/0/0/1/0                       |                          |                          |                          | 6  |
| <u>MW-MB-PT-11</u> 48, 70, 76             | Production System and Intralogistics<br>- Production System Planning<br>- Intralogistics Systems                                                                    |                          | 4/0/0/0/0 PL<br>2/0/0/0/0<br>2/0/0/0/0                           |                          |                          |                          | 6  |
| <u>MW-MB-PT-12</u> 12, 27, 40, 46, 57, 67 | Surface Engineering<br>- Micro and Fine Machining<br>- Thermal Surface Technology                                                                                   |                          | 2/2/0/0 2xPL<br>1/1/0/0/0<br>1/1/0/0/0                           |                          |                          |                          | 6  |
| <u>MW-MB-PT-13</u> 70, 75                 | Photonic Measurement Technology<br>- Photonic Metrology<br>- Practical Course Photonic Metrology                                                                    |                          | 3/0/0/2/0 2xPL<br>3/0/0/0/0<br>0/0/0/2/0                         |                          |                          |                          | 6  |
| <u>MW-MB-PT-14</u> 47, 70, 75             | Joinability<br>- Adhesive Bonding Technology<br>- Soldering Technology<br>- Mechanical Joining                                                                      |                          | 3/2/0/0/0 PL<br>1/1/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0              |                          |                          |                          | 6  |
| <u>MW-MB-PT-15</u> 17, 70, 75, 81         | Production Automatization - Advanced Course<br>- Manufacturing Informatics<br>- Multi-axis Technologies<br>- Rapid Product Development                              |                          | 3/2/0/0/0 PL<br><br>1/1/0/0/0<br>1/1/0/0/0<br>1/0/0/0/0          |                          |                          |                          | 6  |
| <u>MW-MB-PT-16</u> 70, 75                 | Methods to Simulate and Design Part Made by Prototyping, Blanking, and Forming Technology<br>- Forming and Cutting Technology<br>- Original Mould Technology        |                          | 2/2/0/1/0 PL<br><br>2/1/0/0/0<br>0/1/0/1/0                       |                          |                          |                          | 6  |
| <u>MW-MB-PT-17</u> 48, 61, 70, 72, 76     | Manufacturing Management<br>- Strategic Production Logistics<br>- Operative Production Logistics<br>- Production Planning and Control (PPS)<br>- Project Management |                          | 4/1/0/0/0 PL<br>1/0/0/0/0<br>1/0/0/0/0<br>0/1/0/0/0<br>2/0/0/0/0 |                          |                          |                          | 6  |

| Module no.                                                                     | Module name                                                                                                                                                                                  | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                                                                                | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP           |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------|
|                                                                                |                                                                                                                                                                                              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                                                                             | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |              |
| <del>MW-MB-PT-18</del> <u>70, 74</u>                                           | <del>Material Flow Systems</del><br><del>– Material Flow Statement</del><br><del>– Simulation of Material Flow Systems</del>                                                                 |                          | <del>4/1/0/0/0 PL</del><br><del>2/0/0/0/0</del><br><del>2/1/0/0/0</del>                                                 |                          |                          |                          | <del>6</del> |
| <del>MW-MB-PT-19</del> <u>10, 55, 70, 75, 83, 87</u>                           | <del>Work Design</del><br><del>- Occupational Safety and Risk Management</del><br><del>- Working Environment</del><br><del>- Work Science Process Design</del><br><del>- Human Factors</del> |                          | <del>4/0/0/0/0 PL</del><br><del>1/0/0/0/0</del><br><del>1/0/0/0/0</del><br><del>1/0/0/0/0</del><br><del>1/0/0/0/0</del> |                          |                          |                          | <del>6</del> |
| <del>MW-MB-PT-20</del> <u>46, 70, 75</u>                                       | <del>Conceptual Design of Machine Tools</del><br><del>- Fundamentals of WZM Design</del><br><del>- Exercise Conceptual Design</del>                                                          |                          | <del>2/3/0/0/0 PL</del><br><del>2/0/0/0/0</del><br><del>0/3/0/0/0</del>                                                 |                          |                          |                          | <del>6</del> |
| <del>MW-MB-PT-21</del> <u>70, 75</u><br><del>MW-MB-VTMB-10</del> <u>70, 75</u> | <del>Control of Production Machines and Plants</del><br><del>- Motion Controls (NC/MC)</del><br><del>- Basics of Machine Controls</del><br><del>- Function Controls (PLC)</del>              |                          | <del>2/3/0/0/0 PL</del><br><del>0/1/0/0/0</del><br><del>2/0/0/0/0</del><br><del>0/2/0/0/0</del>                         |                          |                          |                          | <del>6</del> |
| <del>MW-MB-PT-04</del> <u>47, 70, 75</u>                                       | <del>Manufacturing Processes - Advanced Course</del><br><del>- Welding Process</del><br><del>- Forming Process Design</del>                                                                  |                          | <del>3/2/0/0/0 PL</del><br><del>2/1/0/0/0</del><br><del>1/1/0/0/0</del>                                                 |                          |                          |                          | <del>7</del> |
| <del>MW-MB-PT-05</del> <u>31, 46, 70, 75</u>                                   | <del>Additive Manufacturing</del><br><del>- Additive Manufacturing</del>                                                                                                                     |                          | <del>4/2/0/0/0 2xPL</del><br><del>4/2/0/0</del>                                                                         |                          |                          |                          | <del>7</del> |
| <del>MW-MB-PT-06</del> <u>70, 75</u>                                           | <del>Development of Machine Tools</del><br><del>- Building Group Design</del><br><del>- Controlled Drives</del>                                                                              |                          | <del>4/2/0/1/0 PL</del><br><del>2/1/0/1/0</del><br><del>2/1/0/0/0</del>                                                 |                          |                          |                          | <del>7</del> |
| <del>MW-MB-PT-07</del> <u>8</u>                                                | <del>Industrial Engineering</del><br><del>– Work Organisation</del><br><del>– Ergonomics</del>                                                                                               |                          | <del>4/2/0/0/0 2xPL</del><br><del>2/1/0/0/0</del><br><del>2/1/0/0/0</del>                                               |                          |                          |                          | <del>7</del> |
| <del>MW-MB-AKM-09</del> <u>17, 26</u><br><del>MW-MB-KST-29</del> <u>17, 26</u> | <del>Tools and Methods of Product Development</del><br><del>– Digital MockUp in Product Development</del><br><del>– Designing with CAD</del>                                                 |                          | <del>2/4/0/0/0 2xPL</del><br><del>1/2/0/0/0</del><br><del>1/2/0/0/0</del>                                               |                          |                          |                          | <del>7</del> |

| Module no.                                                                                                       | Module name                                                                                                                                                                                       | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                         | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                                                                                  |                                                                                                                                                                                                   | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                      | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-AKM-37</a> <sup>26, 32, 70, 75</sup><br><a href="#">MW-MB-KST-32</a> <sup>26, 32, 70, 75</sup> | Methodical Product Development and Selected Tools<br>- Digital MockUp in Product Development<br>- Designing with CAD                                                                              |                          | 2/4/0/0/0 2xPL<br><br>1/2/0/0/0<br>1/2/0/0/0                     |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-32</a> <sup>8, 53</sup>                                                                     | Industrial Engineering and Ergonomics<br>- Work Organisation<br>- Ergonomics                                                                                                                      |                          | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0                         |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-33</a> <sup>53, 70, 75</sup>                                                                | Production Planning - Parts Production and Assembly<br>- Production Planning - Assembly<br>- Production Planning - Parts Production                                                               |                          | 2/2/0/0/0 2xPL<br><br>1/1/0/0/0<br>1/1/0/0/0                     |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-34</a> <sup>53, 70, 75, 82</sup>                                                            | Ergonomics and Industrial Engineering<br>- Work Organisation<br>- Ergonomics                                                                                                                      |                          | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0                         |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-35</a> <sup>75,76</sup>                                                                     | Laser Technology<br>- Laser Technology                                                                                                                                                            |                          | 2/2/0/1/0 2xPL<br>2/2/0/1/0                                      |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-36</a> <sup>76</sup>                                                                        | Production and logistics system design<br>- Design of production systems<br>- Lean production<br>- Design of intralogistics systems                                                               |                          | 4/1/0/0/0 PL<br>2/0/0/0/0<br>0/1/0/0/0<br>2/0/0/0/0              |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-37</a> <sup>76</sup>                                                                        | Production and logistics system operation<br>- Simulation of material flow systems<br>- Strategic production logistics<br>- Operational production logistics<br>- Production planning and control |                          | 3/1/1/0/0 PL<br>1/0/1/0/0<br>1/0/0/0/0<br>1/0/0/0/0<br>0/1/0/0/0 |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-39</a> <sup>82, 87, 87</sup>                                                                | Process Ergonomics and Industrial Engineering<br>- Work Organisation<br>- Ergonomics                                                                                                              |                          | 4/1/0/0/0 2xPL<br><br>2/1/0/0/0<br>2/0/0/0/0                     |                          |                          |                          | <b>7</b> |
| Selection of 3 out of 9 modules                                                                                  |                                                                                                                                                                                                   |                          |                                                                  |                          |                          |                          |          |

| Module no.                                                      | Module name                                                                                                                                                                            | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                                | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|---------------------------------------------------------|--------------------------|--------------------------|----------|
|                                                                 |                                                                                                                                                                                        | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                                      | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-PT-22<sup>3</sup></a>                         | Micro and Nanotechnologies<br><del>- Nanotechnologies</del><br>- Ultra-precision Machining                                                                                             |                          |                          | 3/0/0/1/0 PL<br>1/0/0/1/0<br>2/0/0/0/0                  |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-23<sup>77</sup></a>                        | Laser Precision Machining<br>- Laser precision Machining                                                                                                                               |                          |                          | 2/1/0/1/0 PL<br>2/1/0/1/0                               |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-24<sup>47</sup></a>                        | Weldability<br>- Welding Production and Microjoining Technology<br>- Weld Calculation and Design                                                                                       |                          |                          | 3/2/0/0/0 PL<br><br>2/1/0/0/0<br>1/1/0/0/0              |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-25<sup>46, 47</sup></a>                    | Assembly and Robotics<br>- Handling and Robotics<br>- Assembly Technology and Systems                                                                                                  |                          |                          | 3/2/0/0/0 2xPL<br>2/1/0/0/0<br>1/1/0/0/0                |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-26<sup>21</sup></a>                        | Cutting and Erosion Manufacturing Engineering<br>- Material Removal Technology and Tool Design<br>- Precision, Ultra-precision and Micro-Machining                                     |                          |                          | 3/2/0/0/0 PL<br><br>1/1/0/0/0<br>2/1/0/0/0              |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-27</a>                                     | Tools of Forming and Cutting/Splitting Technology<br>- Forming and Cutting Technology Machines<br>- Tool Design and Production                                                         |                          |                          | 3/2/0/0/0 PL<br><br>1/0/0/0/0<br>2/2/0/0/0              |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-28<sup>32, 46, 74</sup></a>                | Factory Systems<br>- Factory Planning<br>- Seminar Production System Planning                                                                                                          |                          |                          | 2/3/0/0/0 2xPL<br>2/1/0/0/0<br>0/2/0/0/0                |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-29<sup>2, 10, 46, 55, 73, 83, 87</sup></a> | Product Ergonomics and Product Safety<br>- Product Ergonomics<br>- Product Safety                                                                                                      |                          |                          | 3/1/0/0/0 2xPL<br>2/1/0/0/0<br>1/0/0/0/0                |                          |                          | <b>6</b> |
| <a href="#">MW-MB-PT-30</a>                                     | Property and Behavior Analysis of Machine Tools<br>- Basics of trait and Behaviour Analysis<br>- Seminar experimental Behaviour Analysis<br>- Seminar Model-Based Behavioural Analysis |                          |                          | 2/3/0/0/0 PL<br><br>2/0/0/0/0<br>0/2/0/0/0<br>0/1/0/0/0 |                          |                          | <b>6</b> |

| Module no.                                                    | Module name                                                                                                                                                  | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                            | 4 <sup>th</sup> Semester                                                  | 5 <sup>th</sup> Semester | LP       |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-----------------------------------------------------|---------------------------------------------------------------------------|--------------------------|----------|
|                                                               |                                                                                                                                                              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                                  | V*/Ü*/S/P/T<br>(M)                                                        | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-PT-31</a> <sup>3, 77</sup>                  | Nano-Engineering and Ultraprecision Technologies<br>- Nanotechnologies<br>- Ultra-precision Machining                                                        |                          |                          | 3/0/0/1/0 PL<br><br>1/0/0/1/0<br>2/0/0/0/0          |                                                                           |                          | <b>6</b> |
| <a href="#">MW-MB-PT-38</a> <sup>80</sup>                     | Production and logistics system planning<br>- Production system<br>- Factory system<br>- Logistics Lab                                                       |                          |                          | 1/0/4/0/0 PL<br>1/0/2/0/0<br>0/0/1/0/0<br>0/0/2/0/0 |                                                                           |                          | <b>6</b> |
| Selection of 3, not already chosen modules, from 8 modules    |                                                                                                                                                              |                          |                          |                                                     |                                                                           |                          |          |
| <a href="#">MW-MB-PT-12</a> <sup>12, 27, 40, 46, 57, 67</sup> | <del>Surface Engineering</del><br><del>– Micro and Fine Machining</del><br><del>– Thermal Surface Technology</del>                                           |                          |                          |                                                     | <del>2/2/0/0/0 2xPL</del><br><del>1/1/0/0/0</del><br><del>1/1/0/0/0</del> |                          | <b>6</b> |
| <a href="#">MW-MB-PT-13</a> <sup>70, 75</sup>                 | Photonic Measurement Technology<br>- Photonic Metrology<br>- Practical Course Photonic Metrology                                                             |                          |                          |                                                     | 3/0/0/2/0 2xPL<br>3/0/0/0/0<br>0/0/0/2/0                                  |                          | <b>6</b> |
| <a href="#">MW-MB-PT-14</a> <sup>47, 70, 75</sup>             | Joinability<br>- Adhesive Bonding Technology<br>- Soldering Technology<br>- Mechanical Joining                                                               |                          |                          |                                                     | 3/2/0/0/0 PL<br>1/1/0/0/0<br>1/0/0/0/0<br>1/1/0/0/0                       |                          | <b>6</b> |
| <a href="#">MW-MB-PT-15</a> <sup>17, 70, 75, 81</sup>         | Production Automatization - Advanced Course<br>- Manufacturing Informatics<br>- Multi-axis Technologies<br>- Rapid Product Development                       |                          |                          |                                                     | 3/2/0/0/0 PL<br><br>1/1/0/0/0<br>1/1/0/0/0<br>1/0/0/0/0                   |                          | <b>6</b> |
| <a href="#">MW-MB-PT-16</a> <sup>70, 75</sup>                 | Methods to Simulate and Design Part Made by Prototyping, Blanking, and Forming Technology<br>- Forming and Cutting Technology<br>- Original Mould Technology |                          |                          |                                                     | 2/2/0/1/0 PL<br><br>2/1/0/0/0<br>0/1/0/1/0                                |                          | <b>6</b> |

| Module no.                                                                             | Module name                                                                                                                                                                                       | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                                                    | 5 <sup>th</sup> Semester | LP       |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------|--------------------------|----------|
|                                                                                        |                                                                                                                                                                                                   | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                                                          | V*/Ü*/S/P/T              |          |
| <del>MW-MB-PT-17</del> <sup>48, 61, 70, 72, 76</sup>                                   | Manufacturing Management<br>– Strategic Production Logistics<br>– Operative Production Logistics<br>– Production Planning and Control (PPS)<br>– Project Management                               |                          |                          |                          | <del>4/1/0/0/0 PL</del><br>1/0/0/0/0<br>1/0/0/0/0<br>0/1/0/0/0<br>2/0/0/0/0 |                          | <b>6</b> |
| <del>MW-MB-PT-18</del> <sup>70, 74</sup>                                               | Material Flow Systems<br>– Material Flow Statement<br>– Simulation of Material Flow Systems                                                                                                       |                          |                          |                          | <del>4/1/0/0/0 PL</del><br>2/0/0/0/0<br>2/1/0/0/0                           |                          | <b>6</b> |
| <del>MW-MB-PT-19</del> <sup>10, 55, 70, 75, 83, 87</sup>                               | Work Design<br>- Occupational Safety and Risk Management<br>- Working Environment<br>- Work Science Process Design<br>- Human Factors                                                             |                          |                          |                          | 4/0/0/0/0 PL<br>1/0/0/0/0<br>1/0/0/0/0<br>1/0/0/0/0<br>1/0/0/0/0            |                          | <b>6</b> |
| <del>MW-MB-PT-20</del> <sup>46, 70, 75</sup>                                           | Conceptual Design of Machine Tools<br>- Fundamentals of WZM Design<br>- Exercise Conceptual Design                                                                                                |                          |                          |                          | 2/3/0/0/0 PL<br>2/0/0/0/0<br>0/3/0/0/0                                      |                          | <b>6</b> |
| <del>MW-MB-PT-21</del> <sup>70, 75</sup><br><del>MW-MB-VTMB-10</del> <sup>70, 75</sup> | Control of Production Machines and Plants<br>- Motion Controls (NC/MC)<br>- Basics of Machine Controls<br>- Function Controls (PLC)                                                               |                          |                          |                          | 2/3/0/0/0 PL<br>0/1/0/0/0<br>2/0/0/0/0<br>0/2/0/0/0                         |                          | <b>6</b> |
| <del>MW-MB-PT-37</del> <sup>76</sup>                                                   | Production and logistics system operation<br>- Simulation of material flow systems<br>- Strategic production logistics<br>- Operational production logistics<br>- Production planning and control |                          |                          |                          | 3/1/1/0/0 PL<br>1/0/1/0/0<br>1/0/0/0/0<br>1/0/0/0/0<br>0/1/0/0/0            |                          | <b>6</b> |

| Module no.                                                                      | Module name                                                                                                                                                                       | 1 <sup>st</sup> Semester                              | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                                                 |                                                                                                                                                                                   | V*//Ü*)/S/P/T                                         | V*//Ü*)/S/P/T            | V*//Ü*)/S/P/T<br>(M)     | V*//Ü*)/S/P/T<br>(M)     | V*//Ü*)/S/P/T            |    |
| Field of study Simulation Methods in Mechanical Engineering (SIM) <sup>2)</sup> |                                                                                                                                                                                   |                                                       |                          |                          |                          |                          |    |
| Elective modules                                                                |                                                                                                                                                                                   |                                                       |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                                         |                                                                                                                                                                                   |                                                       |                          |                          |                          |                          |    |
| <a href="#">MW-MB-18</a><br><a href="#">4, 9, 36, 70, 75</a>                    | Measurement and Automation Engineering                                                                                                                                            | 2/1/0/1/0 PL<br>(4)                                   | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| <a href="#">MW-MB-19</a><br><a href="#">70, 75</a>                              | Extended Fundamentals for Mechanical Engineering                                                                                                                                  | ##/##/##/##<br>PL <sup>3)</sup>                       |                          |                          |                          |                          | 5  |
| <a href="#">MW-MB-SIM-01</a> <sup>42</sup>                                      | Numerical Methods and Structural Durability<br>- Fatigue and operational Strength<br>- Numerical Methods<br>- Practical Course Numerical Methods/Fatigue and Operational Strength | 4/2/0/1/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0<br>0/0/0/1/0 |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-SIM-02</a>                                                    | Machine Dynamics and Constructive Development Process<br>- Constructive Development Process<br>- Machine Dynamics                                                                 | 4/1/0/2/0 2xPL<br>2/0/0/1/0<br>2/1/0/1/0              |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-SIM-03</a>                                                    | Elastic Structures and Technical Fluid Mechanics<br>- Elastic Structures<br>- Engineering Fluid Mechanics                                                                         | 4/2/0/1/0 2xPL<br>2/1/0/0/0<br>2/1/0/1/0              |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-ET-02</a> <sup>1, 9, 54</sup>                                 | Process Thermodynamics<br>- Process Thermodynamics<br>- Reaction Process Engineering                                                                                              | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0                  |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-ET-03</a> <sup>1, 42</sup>                                    | Fundamentals of Heat and Mass Transfer<br>- Combustion Technology<br>- Heat and Mass Transfer                                                                                     | 4/3/0/0/0 PL<br>2/1/0/0/0<br>2/2/0/0/0                |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-01</a> <sup>36, 70, 75</sup>                               | Fundamentals of Lightweight Engineering<br>- Basic Features of Lightweight Construction<br>- Machine Dynamics                                                                     | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                |                          |                          |                          |                          | 7  |

| Module no.                                       | Module name                                                                                                                                                                                                           | 1 <sup>st</sup> Semester                              | 2 <sup>nd</sup> Semester                                         | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                  |                                                                                                                                                                                                                       | V*/Ü*/S/P/T                                           | V*/Ü*/S/P/T                                                      | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |    |
| <a href="#">MW-MB-LB-02</a> 70, 75, 79           | Lightweight Materials<br>- Fundamentals of Polymer Materials<br>- Plastics Testing<br>- Non-ferrous Metals, Ceramics, Natural Materials                                                                               | 5/0/0/1/0 2xPL<br>2/0/0/0/0<br>1/0/0/1/0<br>2/0/0/0/0 |                                                                  |                          |                          |                          | 7  |
| <a href="#">MW-MB-LRT-01</a> 9                   | Fundamentals of Aerodynamics and Flight Mechanics<br>- Aerodynamics 1<br>- Fundamentals of Flight Mechanics                                                                                                           | 4/3/0/0/0 PL<br>2/2/0/0/0<br>2/1/0/0/0                |                                                                  |                          |                          |                          | 7  |
| <a href="#">MW-MB-LRT-02</a> 17, 64              | Fundamentals of Aerospace Vehicles<br>- Aircraft Design<br>- Space Systems                                                                                                                                            | 4/3/0/0/0 PL<br>2/2/0/0/0<br>2/1/0/0/0                |                                                                  |                          |                          |                          | 7  |
| <a href="#">MW-MB-SIM-06</a>                     | Gasdynamics<br>- Gas Dynamics for Simulation Methods                                                                                                                                                                  |                                                       | 2/2/0/1/0 2xPL<br>2/2/0/1/0                                      |                          |                          |                          | 6  |
| <a href="#">MW-MB-SIM-07</a>                     | Experimental Fluid and Solid Mechanics<br>- Experimental Solid Mechanics<br>- Experimental Fluid Mechanics                                                                                                            |                                                       | 4/0/0/2/0 2xPL<br>2/0/0/1/0<br>2/0/0/1/0                         |                          |                          |                          | 6  |
| <a href="#">MW-MB-SIM-08</a>                     | Beam and Shell Structures<br>- Beam and Shell Structures                                                                                                                                                              |                                                       | 2/2/0/0/0 PL<br>2/2/0/0/0                                        |                          |                          |                          | 6  |
| <a href="#">MW-MB-SIM-09</a> 17, 26              | <del>Design with CAD-Systems/Product Modelling</del><br><del>– Designing with CAD Systems</del><br><del>and optionally</del><br><del>– Product Data Management or</del><br>- Synthesis and Analysis of Product Models |                                                       | 1/2/0/0/0<br>and optionally<br>1/1/0/0/0 or<br>2/1/0/0/0<br>2xPL |                          |                          |                          | 6  |
| <a href="#">MW-MB-ET-04</a> 1, 9, 32, 42, 54, 92 | Fundamentals of Power Machinery<br>- Turbomachinery Basics<br>- Fundamentals of Piston Machines                                                                                                                       |                                                       | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0                         |                          |                          |                          | 6  |
| <a href="#">MW-MB-SIM-04</a> 42                  | Continuum Mechanics and Multifunctional Structures<br>- Continuum Mechanics<br>- Multifunctional Structures                                                                                                           |                                                       | 4/2/0/0/0 2xPL<br>2/1/0/0/0<br>2/1/0/0/0                         |                          |                          |                          | 7  |

| Module no.                                                                                                       | Module name                                                                                                                                                                | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                         | 3 <sup>rd</sup> Semester                 | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------|------------------------------------------|--------------------------|--------------------------|----------|
|                                                                                                                  |                                                                                                                                                                            | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                      | V*/Ü*/S/P/T<br>(M)                       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-SIM-05</a>                                                                                     | Multi-Body Dynamics and Computational Fluid Dynamics<br>- Multi-body Dynamics<br>- Computational Fluid Dynamics                                                            |                          | 4/3/0/0/0 PL<br><br>2/2/0/0/0<br>2/1/0/0/0                       |                                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-LB-04</a>                                                                                      | Calculation of Lightweight Structures<br>- Calculation of Lightweight Structures 1<br>- Simulation Technology                                                              |                          | 3/1/0/2/0 PL<br>2/1/0/0/0<br>1/0/0/2/0                           |                                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-PT-05</a> <a href="#">31, 46, 70, 75</a>                                                       | Additive Manufacturing<br>- Additive Manufacturing                                                                                                                         |                          | 4/2/0/0/0 2xPL<br>4/2/0/0                                        |                                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-SIM-25</a> <a href="#">26, 32</a>                                                              | Product Modelling and Design with CAD-Systems<br>- Designing with CAD Systems and optionally<br>- Product Data Management or<br>- Synthesis and Analysis of Product Models |                          | 1/2/0/0/0<br>and optionally<br>1/1/0/0/0 or<br>2/1/0/0/0<br>2xPL |                                          |                          |                          | <b>6</b> |
| Selection of 2, not already chosen modules, from 4 modules                                                       |                                                                                                                                                                            |                          |                                                                  |                                          |                          |                          |          |
| <a href="#">MW-MB-SIM-17</a>                                                                                     | Multiscale Material Modeling<br>- Multi-scale Numerical Modelling<br>- Damage Mechanics                                                                                    |                          |                                                                  | 3/2/0/0/0 PL<br>2/1/0/0/0<br>1/1/0/0/0   |                          |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-18</a>                                                                                     | Coupled Multifield Problems<br>- Discretisation in Space and Time<br>- Coupled Field Problems                                                                              |                          |                                                                  | 3/2/0/0/0 PL<br>1/1/0/0/0<br>2/1/0/0/0   |                          |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-19</a>                                                                                     | System Dynamics and Structural Vibrations<br>- Vibration Theory<br>- System Dynamics                                                                                       |                          |                                                                  | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0   |                          |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-20</a> <a href="#">9, 46, 75</a><br><a href="#">MW-MB-LRT-27</a> <a href="#">9, 46, 75</a> | Simulation Technology in Fluid Mechanics<br>- Advanced Computational Fluid Dynamics<br>- Flow Simulation on Supercomputers                                                 |                          |                                                                  | 3/1/0/1/0 2xPL<br>2/1/0/0/0<br>1/0/0/1/0 |                          |                          | <b>6</b> |

| Module no.                                                                                                     | Module name                                                                                                                                         | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                                                     | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------|--------------------------|--------------------------|----|
|                                                                                                                |                                                                                                                                                     | V*)/Ü*)/S/P/T            | V*)/Ü*)/S/P/T            | V*)/Ü*)/S/P/T<br>(M)                                                         | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T            |    |
| Selection of 1, not already selected module, from 8 modules                                                    |                                                                                                                                                     |                          |                          |                                                                              |                          |                          |    |
| <a href="#">MW-MB-SIM-17</a>                                                                                   | Multiscale Material Modeling<br>- Multi-scale Numerical Modelling<br>- Damage Mechanics                                                             |                          |                          | 3/2/0/0/0 PL<br>2/1/0/0/0<br>1/1/0/0/0                                       |                          |                          | 6  |
| <a href="#">MW-MB-SIM-18</a>                                                                                   | Coupled Multifield Problems<br>- Discretisation in Space and Time<br>- Coupled Field Problems                                                       |                          |                          | 3/2/0/0/0 PL<br>1/1/0/0/0<br>2/1/0/0/0                                       |                          |                          | 6  |
| <a href="#">MW-MB-SIM-19</a>                                                                                   | System Dynamics and Structural Vibrations<br>- Vibration Theory<br>- System Dynamics                                                                |                          |                          | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                                       |                          |                          | 6  |
| <a href="#">MW-MB-SIM-20</a> <sup>9, 46, 75</sup><br><a href="#">MW-MB-LRT-27</a> <sup>9, 46, 75</sup>         | Simulation Technology in Fluid Mechanics<br>- Advanced Computational Fluid Dynamics<br>- Flow Simulation on Supercomputers                          |                          |                          | 3/1/0/1/0 2xPL<br>2/1/0/0/0<br>1/0/0/1/0                                     |                          |                          | 6  |
| <a href="#">MW-MB-SIM-21</a> <sup>34</sup>                                                                     | Rheology<br>Fundamentals of Rheology<br>and optionally<br><del>—Rheological Seminar or</del><br><del>—Magnetic Liquids or</del><br>- Polymer Theory |                          |                          | 2/0/0/1/0<br>and optionally<br>0/0/0/2/0 or<br>2/0/0/0 or<br>2/0/0/0/0<br>PL |                          |                          | 6  |
| <a href="#">MW-MB-LRT-24</a> <sup>9, 17, 46, 75</sup><br><a href="#">MW-MB-SIM-22</a> <sup>9, 17, 46, 75</sup> | Aeroelastics<br>- Aeroelasticity Design Project<br>- Basics of Aeroelasticity<br>- Structure-flow Coupling                                          |                          |                          | 4/1/0/0/0 2xPL<br>0/1/0/0/0<br>2/0/0/0/0<br>2/0/0/0/0                        |                          |                          | 6  |
| <a href="#">MW-MB-SIM-23</a> <sup>22, 33, 41</sup>                                                             | <del>Process and Structure Simulation</del><br><del>—Process and Structure Simulation</del>                                                         |                          |                          | 2/1/0/1/0 PL<br>2/1/0/1/0                                                    |                          |                          | 6  |
| <a href="#">MW-MB-SIM-24</a> <sup>42, 96</sup>                                                                 | Analytical Methods of Solid Mechanics<br>- Analytical Methods in Solid Mechanics                                                                    |                          |                          | 2/2/0/0/0 PL<br>2/2/0/0/0                                                    |                          |                          | 6  |

| Module no.                                                                                                       | Module name                                                                                                                                                     | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                                                     | 4 <sup>th</sup> Semester                                                   | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------|----------|
|                                                                                                                  |                                                                                                                                                                 | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                                                           | V*/Ü*/S/P/T<br>(M)                                                         | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-SIM-26</a> <sup>34, 49</sup>                                                                   | Rheological Principles and Applications<br>- Fundamentals of Rheology and optionally<br>- Rheological Seminar or<br>- Magnetic Liquids or<br>- Polymer Rheology |                          |                          | 2/0/0/1/0<br>and optionally<br>0/0/0/2/0 or<br>2/0/0/0 or<br>2/0/0/0/0<br>PL |                                                                            |                          | <b>6</b> |
| Selection of 3, not already chosen modules, from 10 modules                                                      |                                                                                                                                                                 |                          |                          |                                                                              |                                                                            |                          |          |
| <a href="#">MW-MB-SIM-06</a>                                                                                     | Gasdynamics<br>- Gas Dynamics for Simulation Methods                                                                                                            |                          |                          |                                                                              | 2/2/0/1/0 2xPL<br>2/2/0/1/0                                                |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-07</a>                                                                                     | Experimental Fluid and Solid Mechanics<br>- Experimental Solid Mechanics<br>- Experimental Fluid Mechanics                                                      |                          |                          |                                                                              | 4/0/0/2/0 2xPL<br>2/0/0/1/0<br>2/0/0/1/0                                   |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-08</a>                                                                                     | Beam and Shell Structures<br>- Beam and Shell Structures                                                                                                        |                          |                          |                                                                              | 2/2/0/0/0 PL<br>2/2/0/0/0                                                  |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-10</a> <sup>17, 25, 32, 46</sup><br><a href="#">MW-MB-AKM-18</a> <sup>17, 25, 32, 46</sup> | Virtual Methods and Tools<br>- Reverse Engineering and optionally<br>- Free-form Modelling or<br>- Hybrid Modelling                                             |                          |                          |                                                                              | 2/1/0/2/0 2xPL<br>1/1/0/0/0<br>and optionally<br>1/0/0/2/0 or<br>1/0/0/2/0 |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-11</a> <sup>85</sup><br><a href="#">MW-MB-LRT-12</a> <sup>85</sup>                         | Fracture Criteria and Fracture Mechanics<br>- Fracture Mechanics                                                                                                |                          |                          |                                                                              | 2/2/0/0/0 PL<br>2/2/0/0/0                                                  |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-12</a><br><a href="#">MW-MB-AKM-19</a>                                                     | Data Processing and Experimental Model Analysis<br>- Experimental Modal Analysis<br>- Measured Value Processing and Diagnostic Technology                       |                          |                          |                                                                              | 3/2/0/1/0 PL<br><br>1/1/0/1/0<br><br>2/1/0/0/0                             |                          | <b>6</b> |

| Module no.                                                                               | Module name                                                                                                   | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester                   | 5 <sup>th</sup> Semester | LP       |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------------------------|--------------------------|----------|
|                                                                                          |                                                                                                               | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)                         | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-SIM-13</a>                                                             | Dynamics of Mechanisms and Elastic Multi-Body Systems<br>- Elastic Multi-body Systems<br>- Mechanism Dynamics |                          |                          |                          | 3/3/0/0/0 PL<br><br>1/2/0/0/0<br>2/1/0/0/0 |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-14</a> <sup>85</sup><br><a href="#">MW-MB-LRT-23</a> <sup>85</sup> | Turbulent Flows and their Modelling<br>- Turbulent Flows and their Modelling                                  |                          |                          |                          | 2/2/0/1/0 PL<br>2/2/0/1/0                  |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-15</a>                                                             | Theory of Materials<br>- Materials Theory                                                                     |                          |                          |                          | 2/2/0/0/0 PL<br>2/2/0/0/0                  |                          | <b>6</b> |
| <a href="#">MW-MB-SIM-16</a> <sup>46</sup>                                               | Numerical Modelling of Multiphase Flows<br>- Numerical Modelling of Multiphase Flows                          |                          |                          |                          | 2/1/0/1/0 2xPL<br>2/1/0/1/0                |                          | <b>6</b> |

| Module no.                                                                                       | Module name                                                                                                                                       | 1 <sup>st</sup> Semester                                  | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
|                                                                                                  |                                                                                                                                                   | V*)/Ü*)/S/P/T                                             | V*)/Ü*)/S/P/T            | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T<br>(M)     | V*)/Ü*)/S/P/T            |    |
| Field of study Processing Machines and Textile Machines Engineering (VTMB) <sup>2)</sup>         |                                                                                                                                                   |                                                           |                          |                          |                          |                          |    |
| Elective modules                                                                                 |                                                                                                                                                   |                                                           |                          |                          |                          |                          |    |
| Selection of modules amounting to 60 LP                                                          |                                                                                                                                                   |                                                           |                          |                          |                          |                          |    |
| <a href="#">MW-MB-18</a><br><a href="#">4, 9, 36, 70, 75</a>                                     | Measurement and Automation Engineering                                                                                                            | 2/1/0/1/0 PL<br>(4)                                       | 2/1/0/1/0 2xPL<br>(4)    |                          |                          |                          | 8  |
| <a href="#">MW-MB-19</a><br><a href="#">70, 75</a>                                               | Extended Fundamentals for Mechanical Engineering                                                                                                  | ##/##/##/<br>PL <sup>3)</sup>                             |                          |                          |                          |                          | 5  |
| <a href="#">MW-MB-VTMB-34</a> <sup>46</sup>                                                      | Drive Systems for Processing Machines and Textile Machines<br>- Movement Technology and Design<br>- Mechanisms in Processing and Textile Machines | 2/3/0/0/0 2xPL<br><br>1/1/0/0/0<br><br>1/2/0/0/0          |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-02</a> <sup>70, 75</sup><br><a href="#">MW-MB-KST-01</a> <sup>70, 75</sup> | Fluid Power and Electrical Drive Systems<br>- Basics of Fluid Power Drives and Controls<br>- Electric Drives                                      | 4/2/0/0/0 PL<br>2/1/0/0/0<br>2/1/0/0/0                    |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-AKM-03</a> <sup>70, 75</sup>                                                   | Mechanical Drives<br>- Drive Elements<br>- Design Document Drive Assembly                                                                         | 2/3/0/0/0 2xPL<br>2/1/0/0/0<br>0/2/0/0/0                  |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-02</a> <sup>70, 75, 79</sup>                                                | Lightweight Materials<br>- Fundamentals of Polymer Materials<br>- Plastics Testing<br>- Non-ferrous Metals, Ceramics, Natural Materials           | 5/0/0/1/0 2xPL<br>2/0/0/0/0<br>1/0/0/1/0<br><br>2/0/0/0/0 |                          |                          |                          |                          | 7  |
| <a href="#">MW-MB-LB-03</a> <sup>1, 39, 70, 75</sup>                                             | Fiber-Reinforced Materials<br>- Fibre Composites<br>- Textile semi-finished Products and Process                                                  | 4/1/0/1/0 PL<br>2/1/0/0/0<br>2/0/0/1/0                    |                          |                          |                          |                          | 7  |

| Module no.                                                   | Module name                                                                                                                                             | 1 <sup>st</sup> Semester                                | 2 <sup>nd</sup> Semester                                                  | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------|
|                                                              |                                                                                                                                                         | V*/Ü*/S/P/T                                             | V*/Ü*/S/P/T                                                               | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-PT-02</a> <sup>54, 70</sup>                | Production Engineering - Manufacturing and Planning<br>- Occupational Science<br>- Production Planning<br>- Production and Logistics                    | 4/1/0/0/0 PL<br><br>1/0/0/0/0<br>2/1/0/0/0<br>1/0/0/0/0 |                                                                           |                          |                          |                          | <b>7</b> |
| <a href="#">MW-MB-VTMB-06</a>                                | Process Simulation for Processing Machines and Textile Machines<br>- Selected Simulation Applications<br>- Modelling and Simulation                     |                                                         | 3/2/0/0/0 2xPL<br><br>1/2/0/0/0<br>2/0/0/0/0                              |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-VTMB-09</a>                                | Machines and Technologies for Yarn Structures, especially Composites<br>- Machines and Technologies for yarn Constructions, especially for Composites   |                                                         | 2/2/0/1/0 PL<br><br>2/2/0/1/0                                             |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-10</a> <sup>20</sup>                   | <del>Industrial Design Methodology</del><br><del>- Introduction to Design Process and -Tools</del><br><del>- Internship Design Process and -Tools</del> |                                                         | <del>2/0/0/2/0 2xPL</del><br><del>2/0/0/0/0</del><br><del>0/0/0/2/0</del> |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-13</a>                                 | Simulation Methods in Drive Technology<br>- CAE Applications/FEM<br>- Modelling and Simulation of Electromechanical Drive Systems                       |                                                         | 3/2/0/0/0 PL<br>1/1/0/0/0<br><br>2/1/0/0/0                                |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-19</a><br><a href="#">MW-MB-SIM-12</a> | Data Processing and Experimental Model Analysis<br>- Experimental Modal Analysis<br>- Measured Value Processing                                         |                                                         | 3/2/0/1/0 PL<br><br>1/1/0/1/0<br>2/1/0/0/0                                |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-30</a> <sup>20</sup>                   | Industrial Design Methodology in Product Development<br>- Introduction to Design Process and -Tools<br>- Internship Design Process and -Tools           |                                                         | 2/0/0/2/0 2xPL<br><br>2/0/0/0/0<br>0/0/0/2/0                              |                          |                          |                          | <b>6</b> |
| <a href="#">MW-MB-VTMB-30</a>                                | Machines and Technologies for 2D and 3D Textile Structures<br>- Machines and Technologies for 2D and 3D Textile Constructions                           |                                                         | 3/1/0/2/0 2xPL<br><br>3/1/0/2/0                                           |                          |                          |                          | <b>7</b> |

| Module no.                                                  | Module name                                                                                                                                                          | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester                                   | 3 <sup>rd</sup> Semester                   | 4 <sup>th</sup> Semester | 5 <sup>th</sup> Semester | LP       |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------|--------------------------------------------|--------------------------|--------------------------|----------|
|                                                             |                                                                                                                                                                      | V*/Ü*/S/P/T              | V*/Ü*/S/P/T                                                | V*/Ü*/S/P/T<br>(M)                         | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-<br/>VTMB-31</a> <sup>32</sup>            | Machines and Technologies for Textile Finishing and Ready-Made Technology<br>- Textile Finishing Machines and Technologies<br>- Confection Machines and Technologies |                          | 3/1/0/3/0 PL<br><br>1/1/0/1/0<br>2/0/0/2/0                 |                                            |                          |                          | <b>7</b> |
| <del><a href="#">MW-MB-<br/>VTMB-32</a> <sup>16</sup></del> | <del>Mechanism Synthesis and Multi-Body Simulation<br/>- Mechanism Synthesis<br/>- Multibody Systems</del>                                                           |                          | <del>4/3/0/0/0 2xPL<br/><br/>2/1/0/0/0<br/>2/2/0/0/0</del> |                                            |                          |                          | <b>7</b> |
| <a href="#">MW-MB-<br/>VTMB-33</a> <sup>46</sup>            | Control of Motion-Guided Machine Systems<br>- Basics of Machine Controls<br>- Exercise-CNC<br>- Exercise-SPS                                                         |                          | 2/3/0/0/0 2xPL<br>2/0/0/0/0<br>0/1/0/0/0<br>0/2/0/0/0      |                                            |                          |                          | <b>7</b> |
| <a href="#">MW-MB-<br/>VTMB-35</a> <sup>16</sup>            | Multi-Body Dynamics and Mechanism Synthesis<br>- Mechanism Synthesis<br>- Multibody Systems                                                                          |                          | 4/3/0/0/0 PL<br><br>2/1/0/0/0<br>2/2/0/0/0                 |                                            |                          |                          | <b>7</b> |
| Choice of 3 out of 7 modules                                |                                                                                                                                                                      |                          |                                                            |                                            |                          |                          |          |
| <a href="#">MW-MB-<br/>VTMB-15</a> <sup>32</sup>            | Joining Technologies for Flexible Materials<br>- Joining Technology of flexible Materials                                                                            |                          |                                                            | 2/1/0/2/0 PL<br>2/1/0/2/0                  |                          |                          | <b>6</b> |
| <a href="#">MW-MB-<br/>VTMB-16</a>                          | Development of Complex Textile Constructions<br>- Development of complex Textile Constructions                                                                       |                          |                                                            | 0/4/0/1/0 PL<br><br>0/4/0/1/0              |                          |                          | <b>6</b> |
| <a href="#">MW-MB-<br/>VTMB-17</a>                          | Machines and Technologies for Technical Textiles<br>- Assembly of Technical Textiles<br>- Technical Textiles                                                         |                          |                                                            | 4/0/0/1/0 PL<br><br>2/0/0/0/0<br>2/0/0/1/0 |                          |                          | <b>6</b> |

| Module no.                                             | Module name                                                                                                                                                                    | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester                   | 4 <sup>th</sup> Semester                     | 5 <sup>th</sup> Semester | LP       |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------------------------|----------------------------------------------|--------------------------|----------|
|                                                        |                                                                                                                                                                                | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)                         | V*/Ü*/S/P/T<br>(M)                           | V*/Ü*/S/P/T              |          |
| <a href="#">MW-MB-VTMB-19</a>                          | Machines and Technologies for the Manufacture of Nonwovens, Textile Recycling and Resource Efficiency<br>- Textile Recycling and Resource Efficiency<br>- Nonwovens Technology |                          |                          | 4/0/0/1/0 PL<br><br>2/0/0/0/0<br>2/0/0/1/0 |                                              |                          | <b>6</b> |
| <a href="#">MW-MB-VTMB-23</a> <sup>15</sup>            | Packaging Technology<br>- Packaging Material/Packaging<br>- Packaging Machine                                                                                                  |                          |                          | 4/1/0/0/0 PL<br>2/1/0/0/0<br>2/0/0/0/0     |                                              |                          | <b>6</b> |
| <a href="#">MW-MB-VTMB-24</a> <sup>15</sup>            | Food Machines and Pharmaceutical Machines<br>- Hygienic Behaviour of Processing Machines<br>- Directive-Compliant Machine Design                                               |                          |                          | 3/2/0/0/0 2xPL<br>2/1/0/0/0<br>1/1/0/0/0   |                                              |                          | <b>6</b> |
| <a href="#">MW-MB-AKM-29</a> <sup>17, 32, 52, 94</sup> | Systems Engineering<br>- Design of Mechatronic Systems<br>- Interdisciplinary Product Development                                                                              |                          |                          | 3/2/0/1/0 2xPL<br>2/1/0/0/0<br>1/1/0/1/0   |                                              |                          | 6        |
| Choice of 3 out of 5 modules                           |                                                                                                                                                                                |                          |                          |                                            |                                              |                          |          |
| <a href="#">MW-MB-VTMB-13</a> <sup>15</sup>            | Processing Technology<br>- Parameters/Values of the Processing Technology<br>- Optimisation of Processing Operations                                                           |                          |                          |                                            | 2/1/0/1/0 2xPL<br><br>1/0/0/0/0<br>1/1/0/1/0 |                          | <b>6</b> |
| <a href="#">MW-MB-VTMB-14</a> <sup>15</sup>            | Planning and Optimizing of Processing Lines<br>- Operating Behaviour<br>- Project Planning                                                                                     |                          |                          |                                            | 4/1/0/0/0 PL<br>2/0/0/0/0<br>2/1/0/0/0       |                          | <b>6</b> |
| <a href="#">MW-MB-VTMB-18</a> <sup>32</sup>            | 3D CAE Technology for Fiber-Based Materials<br>- 3D CAE Technology for Fibre-based Materials                                                                                   |                          |                          |                                            | 1/2/0/2/0 PL<br><br>1/2/0/2/0                |                          | <b>6</b> |

| Module no.                                  | Module name                                                                                  | 1 <sup>st</sup> Semester | 2 <sup>nd</sup> Semester | 3 <sup>rd</sup> Semester | 4 <sup>th</sup> Semester      | 5 <sup>th</sup> Semester | LP         |
|---------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|--------------------------|------------|
|                                             |                                                                                              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T              | V*/Ü*/S/P/T<br>(M)       | V*/Ü*/S/P/T<br>(M)            | V*/Ü*/S/P/T              |            |
| <a href="#">MW-MB-VTMB-20</a> <sup>81</sup> | Functionalisation and Interface Design<br>- Functionalisation and Boundary Layer Design      |                          |                          |                          | 2/0/0/3/0 PL<br><br>2/0/0/3/0 |                          | <b>6</b>   |
| <a href="#">MW-MB-VTMB-22</a>               | Fiber-Based Implants and Tissue Engineering<br>- Fibre-based Implants and Tissue Engineering |                          |                          |                          | 2/0/0/2/0 PL<br><br>2/0/0/2/0 |                          | <b>6</b>   |
| <b>Credit points</b>                        |                                                                                              | <b>30</b>                | <b>30</b>                | <b>30</b>                | <b>30</b>                     | <b>30</b>                | <b>150</b> |

## Annex

|     |                                                                                                   |
|-----|---------------------------------------------------------------------------------------------------|
| V   | Lecture*)                                                                                         |
| Ü   | Exercise*)                                                                                        |
| P   | Practical course                                                                                  |
| S   | Seminar                                                                                           |
| T   | Tutorial                                                                                          |
| PL  | Exam performance(s)                                                                               |
| PVL | Preliminary examination(s)                                                                        |
| LP  | Credit Points - in brackets ( ) pro rata allocation to individual semesters according to Workload |
| M   | Mobility window according to § 6 Paragraph 1 Sentence 3 Study Regulations                         |
| SWS | Lecture hours per week                                                                            |

- \*) Pursuant to § 5 Paragraph 1 Sentence 3 Study Regulations, the teaching and learning forms of lecture and tutorial in the distance learning programme are each replaced by the teaching and learning form of consultation.
- 1) Alternatively, at the student's choice, Courses with a total volume of at least 4 SWS including the examination performances specified according to the catalogue Interdisciplinary Technical Qualification of Mechanical Engineering.
- 2) Alternatively, at the student's choice, one of eight fields of study and, taking into account § 25 Paragraph 2 Sentence 3, one of four fields of study.
- 3) Alternatively, at the student's choice, Courses with a total volume of 5 SWS including the examination performances specified according to the catalogue Advanced Fundamentals in Mechanical Engineering.
- 4) Alternatively, at the student's choice, Courses with a total volume of at least 4 SWS including the examination performances specified according to the catalogue Lightweight Structures and Technologies of Selected Industries.
- 5) Alternatively, at the student's choice, either the module MW-MB-ET-13 Refrigeration Systems or the module MW-MB-ET-36 International Refrigeration and Compressor Course can be chosen.
- 6) Alternatively, at the student's choice, either the module MW-MB-ET-27 Cryogenics or the module MW-MB-ET-35 European Course of Cryogenics can be chosen.
- 7) Alternatively, at the student's choice, either the module MW-MB-ET-05 Fundamentals of Refrigeration and Air Conditioning or the module MW-MB-ET-37 Principles of Refrigeration and Air Conditioning can be chosen.
- 1 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 according to the resolution of the Faculty Council of 15.04.2020 Adjustment in the field Usability.
- 2 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 according to the resolution of the Faculty Council of 15.04.2020 Adjustment in the field Requirements for participation.
- 3 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 in accordance with the resolution of the Faculty Council of 15.04.2020 Replacement of the teaching offer.
- 4 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Process Engineering and Natural Materials Technology of 29 April 2019, the Bachelor's degree programme in Process Engineering and Natural Materials Technology of 28.04.2019 or Diploma-postgraduate degree programme in Process Engineering and Natural Materials Technology of 15.02.2020 according to the decision of the Faculty Council of 15 April 2020 Adjustment in the field Usability.
- 5 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Materials Science of 29 April 2019 or Bachelor's degree programme in Materials Science of 28.04.2019 according to the resolution of the Faculty Council of 15.04.2020 Adjustment in the field Usability.
- 6 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Process Engineering and Natural Materials Technology of 29 April 2019, the Bachelor's degree programme in Process Engineering and Natural Materials Technology of 28.04.2019 and the Diploma-postgraduate degree programme in Process Engineering and Natural Materials Technology of 15.02.2020 in accordance with the resolution of the Faculty Council of 17.03.2021 Adjustment in the field Usability.
- 7 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Materials Science of 29 April 2019 or Bachelor's degree programme in Materials Science of 28.04.2019 according to the resolution of the Faculty Council of 21.04.2021 Adjustment in the field Usability.

- <sup>8</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 in accordance with the resolution of the Faculty Council of 21.04.2021 Replacing the teaching offer.
- <sup>9</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 in accordance with the resolution of the Faculty Council of 21.04.2021 Adjustment in the field Usability.
- <sup>10</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 in accordance with the resolution of the Faculty Council of 21.04.2021 Adjustment in the field Requirements for participation.
- <sup>11</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 21.04.2021 Adjustment in the field Frequency of the module.
- <sup>12</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the decision of the Faculty Council of 21.04.2021 - will not be offered in summer semester 2021.
- <sup>13</sup> Adjustment of the semester-based lecture hours per week allocation in summer semester 2021 due to the departure of the lecturer and pending replacement of the professorship.
- <sup>14</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 in accordance with the resolution of the Faculty Council of 21.04.2021 Extension of the range of courses.
- <sup>15</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 21.07.2021 Adjustment in the field Prerequisites for participation.
- <sup>16</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma-postgraduate Course in Mechanical Engineering dated 17.01.2020 in accordance with the resolution of the Faculty Council dated 21.07.2021 Replacing the course offerings.
- <sup>17</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 21.07.2021 Adjustment in the field responsible lecturer.
- <sup>18</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 21.07.2021 Replacement of the course offering in WiSe 2021/2022 - Replacement will only be offered in WiSe 2021/2022.
- <sup>19</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 21.07.2021 Adjustment in the field Usability.
- <sup>20</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Bachelor's degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 20.10.2021 Replacement of the course offering.
- <sup>21</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 20.10.2021 Adjustment in the field responsible lecturer.
- <sup>22</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 20.10.2021 - will not be offered in WiSe 2021/2022.
- <sup>23</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Bachelor's degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 20.10.2021 Adjustment in the field Usability.
- <sup>24</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Bachelor's degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 20.04.2022 Adjustment in the field Usability.
- <sup>25</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 20.04.2022 Adjustment in the field Prerequisites for participation.
- <sup>26</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 20.04.2022 Replacement of the course offerings.
- <sup>27</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 20.04.2022 - will not be offered in SoSe 2022.

- 29 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 20.04.2022 Extension of the course offerings.
- 30 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 20.04.2022 Replacement of the course offering in SoSe 2022 - Replacement is only offered in SoSe 2022.
- 31 Correction of SWS distribution and merging of courses.
- 32 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 15.06.2022 Adjustment in the field responsible lecturer.
- 33 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 19.10.2022 - will not be offered in WiSe 2022/2023.
- 34 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 19.10.2022 Replacement of the course offering.
- 36 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Bachelor's degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 19.10.2022 Adjustment in the field Usability.
- 37 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 19.10.2022 Adjustment in the field Prerequisites for participation.
- 38 Correction of assigned courses, 19.10.2022.
- 38 Correction of assigned courses, 19.10.2022.
- 39 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 19.04.2023 Adjustment in the field responsible lecturer.
- 40 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 19.04.2023 - will not be offered in SoSe 2022.
- 41 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 19.04.2023 - Cancellation of the course offering.
- 42 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering dated 17.05.2019 or Bachelor's degree programme in Mechanical Engineering dated 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering dated 17.01.2020 according to the resolution of the Faculty Council dated 19.04.2023 Adjustment in the field Usability.
- 43 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 19.04.2023 Replacement of the course offering.
- 44 Adjustment of the semester-wise SWS allocation in SoSe 2023 due to the departure of the lecturer and pending replacement of the professorship.
- 45 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 19.04.2023 Replacement of the course offering in SoSe 2023 - Replacement is only offered in SoSe 2023.
- 46 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 17.05.2023 Specify in the field requirements for the award of credit points according to the requirements of the accreditation process.
- 47 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 17.05.2023 Adjustment in the field responsible lecturer.
- 48 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma Program in Mechanical Engineering, May 17, 2019, or Diploma Postgraduate Program in Mechanical Engineering, January 17, 2020, according to the resolution of the Faculty Council, 10/18/2023 Adjustment in the Responsible Lecturer field.
- 49 Adjustment of assigned courses, 10/18/2023.
- 50 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma Program in Mechanical Engineering, May 17, 2019, or Diploma Postgraduate Program in Mechanical Engineering, January 17, 2020, according to the resolution of the Faculty Council, 10/18/2023 Replacing the course offered in WiSe 2023/2024 - Replacement will only be offered in WiSe 2023/2024.
- 51 Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma Program in Mechanical Engineering dated May 17, 2019 or Bachelor Program in Mechanical Engineering dated May 17, 2019 or Diploma Postgraduate Program in Mechanical Engineering dated January 17, 2020 according to the resolution of the Faculty Council dated 10/18/2023 Adjustment in the field Applicability.

- <sup>52</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering dated 17 May 2019 or Bachelor's degree program in Mechanical Engineering dated 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering dated 17 January 2020 in accordance with the resolution of the Faculty Council dated 15.11.2023 Specification in the field Requirements for the awarding of credit points in accordance with the requirements of the accreditation procedure.
- <sup>53</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 of the Study Regulations for the Diploma degree program in Mechanical Engineering of 17 May 2019 or the Bachelor's degree program in Mechanical Engineering of 17 May 2019 or the Diploma postgraduate degree program in Mechanical Engineering of 17 January 2020 in accordance with the resolution of the Faculty Council of 15 November 2023 Replacement of the course offerings.
- <sup>54</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering of 17 May 2019 or Bachelor's degree program in Mechanical Engineering of 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering of 17 January 2020 in accordance with the decision of the Faculty Council of 15 November 2023 Adaptation in the applicability field.
- <sup>55</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma Program in Mechanical Engineering of 17 May 2019 and Diploma Postgraduate Program in Mechanical Engineering of 17 January 2020 in accordance with the resolution of the Faculty Council of 15 November 2023 Adjustment in the field Requirements for participation.
- <sup>56</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 17 April 2024 Replacement of the course offering.
- <sup>57</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 17 April 2024- will not be offered in SoSe 2024.
- <sup>58</sup> Adjustment of the semester-based SWS allocation in summer semester 2024 due to the departure of the lecturer and pending replacement of the professorship.
- <sup>59</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 17 April 2024 Replacement of the course offering in SoSe 2024 - Replacement is only offered in SoSe 2024.
- <sup>60</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree program in Mechanical Engineering dated 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering dated 17 January 2020 according to the resolution of the Faculty Council of 17 April 2024 Adjustment made in the Prerequisites for participation field and in the Teaching and learning forms field to add German and English as teaching languages due to the temporary replacement of the chair.
- <sup>61</sup> Correction of assigned courses, 17 April 2024.
- <sup>62</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 23 October 2024 Replacement of the course offering.
- <sup>63</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma Program in Mechanical Engineering, May 17, 2019, or Diploma Postgraduate Program in Mechanical Engineering, January 17, 2020, according to the resolution of the Faculty Council from 23 October 2024 Replacing the course offered in WiSe 2024/2025 - Replacement will only be offered in WiSe 2024/2025.
- <sup>64</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering of 17 May 2019 or Bachelor's degree program in Mechanical Engineering of 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering of 17 January 2020 in accordance with the decision of the Faculty Council from 23 October 2024 Adaptation in the applicability field.
- <sup>65</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council of 17.05.2023 Specify in the field requirements for the award of credit points.
- <sup>66</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 16 April 2025- will not be offered in SoSe 2025.
- <sup>67</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 16 April 2025 - Cancellation of the course offering.
- <sup>68</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 16 April 2025 Replacement of the course offering in SoSe 2025 - Replacement is only offered in SoSe 2025.
- <sup>69</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 16 April 2025 one-time postponement of the offer, instead of regularly in the SoSe, once in the WiSe of 2025/2026.
- <sup>70</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering of 17 May 2019 or Bachelor's degree program in Mechanical Engineering of 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering of 17 January 2020 in accordance with the decision of the Faculty Council from 16 April 2025 Adaptation in the usability field.
- <sup>71</sup> Adjustment of the semester-based SWS allocation in summer semester 2025 due to the departure of the lecturer and pending replacement of the professorship.
- <sup>72</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering dated 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering dated 17 January 2020 in accordance with the resolution of the Faculty Council from 16 April 2025 Specification in the field Requirements for the awarding of credit points.

- <sup>73</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 22 October 2025- will not be offered in WiSe 2025/2026.
- <sup>74</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 22 October 2025- Cancellation of the course offering.
- <sup>75</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering of 17 May 2019 or Bachelor's degree program in Mechanical Engineering of 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering of 17 January 2020 in accordance with the decision of the Faculty Council from 22 October 2025 Adaptation in the usability field.
- <sup>76</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 22 October 2025 Replacement of the course offering.
- <sup>77</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma Program in Mechanical Engineering of 17 May 2019 and Diploma Postgraduate Program in Mechanical Engineering of 17 January 2020 in accordance with the resolution of the Faculty Council of 22 October 2025 Adjustment in the field Requirements for participation.
- <sup>78</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 22 October 2025 Replacement of the course offering in WiSe 2025/2026- Replacement is only offered in WiSe 2025/2026.
- <sup>79</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council from 22 October 2025 Adjustment in the field responsible lecturer.
- <sup>80</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council from 22 October 2025 Extension of the course offerings.
- <sup>81</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 15 April 2026- will not be offered in SoSe 2025.
- <sup>82</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 15 April 2026 Replacement of the course offering.
- <sup>83</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma Program in Mechanical Engineering of 17 May 2019 and Diploma Postgraduate Program in Mechanical Engineering of 17 January 2020 in accordance with the resolution of the Faculty Council of 15 April 2026 Adjustment in the field Requirements for participation.
- <sup>84</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 15 April 2026 - Cancellation of the course offering.
- <sup>85</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering of 17 May 2019 or Bachelor's degree program in Mechanical Engineering of 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering of 17 January 2020 in accordance with the decision of the Faculty Council from 15 April 2026 Adaptation in the usability field.
- <sup>86</sup> Update to the assigned courses, April 15, 2026.
- <sup>87</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Bachelor's degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council from 15 April 2026 Adjustment in the field responsible lecturer.
- <sup>88</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 15 April 2026 Changes to the course offerings (semester schedule).
- <sup>89</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 15 April 2026 Updates to the Teaching and learning methods and Requirements for participation fields. Specification of the language of instruction due to the appointment of a new professor begins with the SoSe 2027.
- <sup>90</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 15 April 2026 Replacement of the course offering in SoSe 2025 - Replacement is only offered in SoSe 2025.
- <sup>91</sup> Adjustment to the semester-by-semester distribution of lecture hours for the Summer Semester 2026, 15 April, 2026.
- <sup>92</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering of 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering of 17.01.2020 according to the resolution of the Faculty Council from 20 May 2026 Adjustment in the field responsible lecturer.

- <sup>93</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 28 October 2026- Cancellation of the course offering.
- <sup>94</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree program in Mechanical Engineering of 17 May 2019 or Diploma postgraduate degree program in Mechanical Engineering of 17 January 2020 in accordance with the decision of the Faculty Council from 28 October 2026 Adaptation in the usability field.
- <sup>95</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 28 October 2026 Replacement of the course offering in WiSe 2026/2027- Replacement is only offered in WiSe 2026/2027.
- <sup>96</sup> Extension in accordance with § 6 para. 6 and § 10 para. 2 Study Regulations for the Diploma degree programme in Mechanical Engineering from 17.05.2019 or Diploma-postgraduate degree programme in Mechanical Engineering from 17.01.2020 according to the resolution of the Faculty Council from 28 October 2026 - will not be offered in WiSe 2026/2027.