

Course offerings in Distance Learning Diploma-postgraduate degree programme Mechanical Engineering according to PO 2020

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

Status: 15.11.2023

Content:

[Mandatory area](#)

[Compulsory elective area](#)

Assignment of the elective modules of the fields of study in detail (semester 1 - 8)

- [Field of study General and Structural Mechanical Engineering \(AKM\)](#)
- [Field of study Power Engineering \(ET\)](#)
- [Field of study Aerospace Engineering \(LRT\)](#)
- [Field of study Production Engineering \(PT\)](#)

[Annex](#)

[Footnotes](#)

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. Within distance learning, lectures and tutorials are replaced by blocked consultations.

| Module no. | Module name | 1. semester | 2. semester | 3. semester | 4. semester | 5. semester | 6. semester | 7. semester | 8. semester | LP |
|--------------------------|---|-------------|-------------|-------------------------------|-------------------------------|-------------|-------------|---|-------------|-----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Mandatory area | | | | | | | | | | |
| MW-MB-21 | Research Internship | | | | | | | 1 SWS Project, Project Work425 h (processing time 26 weeks) with presentation 2xPL (16) | | 16 |
| MW-MB-22 | Interdisciplinary Technical Qualification of Mechanical Engineering | | | ## PL ¹⁾ (4) | ## PL ¹⁾ (4) | | | | | 8 |
| Diploma thesis | | | | | | | | | 27 | 27 |
| Colloquium | | | | | | | | | 3 | 3 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|--|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Compulsory elective area | | | | | | | | | | |
| Field of study General and Structural Mechanical Engineering (AKM) ²⁾ | | | | | | | | | | |
| Elective modules | | | | | | | | | | |
| Selection of modules amounting to 60 LP | | | | | | | | | | |
| MW-MB-18 ^{4, 9, 36} | Measurement and Automation Engineering | ## PL (4) | ## 2xPL (4) | | | | | | | 8 |
| MW-MB-19 | Extended Fundamentals for Mechanical Engineering <i>Consultation offer:</i> - Mechanism Technology - Drive Systems | ## PL ³⁾ ## ## | | | | | | | | 5 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|-------------------------------|-------------|-----------------------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-01 MB-01 AKM-01 17, 23, 24, 32 MW-28 MB-KST-28 17, 23, 24, 32 MW-01 MB-VTMB-01 17, 23, 24, 32 | Fundamentals of Construction and Dynamic Dimensioning of Machines - Constructive Development Process - Machine Dynamics | #/# 2xPL #/# #/# | | | | | | | | 7 |
| MW-02 MB-02 AKM-02 MW-01 MB-KST-01 | Fluid Power and Electrical Drive Systems - Basics of Fluid Power Drives and Controls - Electric Drives | | | #/# PL #/# #/# | | | | | | 7 |
| MW-03 MB-03 AKM-03 | Mechanical Drives - Drive Elements - Design Document Drive Assembly | | | #/# 2xPL #/# #/# | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|---|---|-------------|---------------------------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-ET-03 ^{1, 42} | Fundamentals of Heat and Mass Transfer - Combustion Technology - Heat and Mass Transfer | | | ##/ PL ##/ ##/ | | | | | | 7 |
| MW-MB-PT-01 ¹ | Production Engineering - Manufacturing Processes - Joining Technology - Surface and Coating Technology - Forming and Remoulding Technology - Cutting and Removal Technology | ##/ 2xPL ##/ ##/ ##/ ##/ | | | | | | | | 7 |
| MW-MB-PT-02 ⁵⁴ | Production Engineering - Manufacturing and Planning - Occupational Science - Production Planning - Production and Logistics | | | ##/ PL ##/ ##/ ##/ | | | | | | 7 |
| MW-MB-PT-03 | Production Engineering - Machine Tools and Production Automatization - Production Automation - Machine Tools - Basics | | | ##/ PL ##/ ##/ | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|--|-------------|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-AKM-05 | Intralogistics - Fundamentals - Elements and supporting Structures - Logistics Lab - Intralogistics Systems | | ## 2xPL ## ## ## | | | | | | | 7 |
| MW-MB-AKM-09 ^{17, 26} MW-MB-KST-29 ^{17, 26} | Tools and Methods of Product Development - Digital MockUp in Product Development - Designing with CAD | | ## PL ## ## | | | | | | | 7 |
| MW-MB-AKM-37 ^{26, 32} MW-MB-KST-32 ^{26, 32} | Methodical Product Development and Selected Tools - Digital MockUp in Product Development - Designing with CAD | | ## PL ## ## | | | | | | | 7 |
| MW-MB-PT-04 ⁴⁷ | Manufacturing Processes - deepening - Welding Process - Forming Process Design | | ## PL ## ## | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|------------------------------|--|-------------|-------------|-------------|--------------------------------|--------------------------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-AKM-07 | Fluid Power Components and Systems - Sealing Technology - Fluid Power Components and Systems | | | | ## PL ## ## | | | | | 6 |
| MW-MB-AKM-08 | Off-road Vehicle Technology - Systems - Construction Machinery Technology - Recycling Technology - Engines and steering Systems | | | | ## PL ## ## ## | | | | | 6 |
| Choice of 3 modules | | | | | | | | | | |
| MW-MB-AKM-22 | Intralogistics - System Design - Analytical Methods - Simulation-based System Optimisation - System Design IL System | | | | | ## PL ## ## ## | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|---|-------------|-------------|-------------|-------------|-----------------------------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-AKM-24 | Computational Engineering in Fluid Power - Modelling and Simulation of Fluid Power Components - Modelling and Simulation of Fluid Power Systems | | | | | ##/ PL ##/ ##/ | | | | 6 |
| MW-MB-AKM-25 46 | Material Handling - Hoisting Machines - Design Document main Assembly of a Hoisting Machine | | | | | ##/ 2xPL ##/ ##/ | | | | 6 |
| MW-MB-AKM-29 ^{17, 32, 52} | Systems Engineering - Design of Mechatronic Systems - Interdisciplinary Product Development | | | | | ##/ 2xPL ##/ ##/ | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|--|-------------|-------------|-------------|-------------|-------------|--------------------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Choice of 3 modules | | | | | | | | | | |
| MW-MB-AKM-16 ^{17, 32} | Product Modelling - Product Data Management - Synthesis and Analysis of Product Models | | | | | | ## PL ## ## | | | 6 |
| MW-MB-AKM-17 | Materials and Failure Analysis - Construction Materials - Friction, Wear and Damage | | | | | | ## PL ## ## | | | 6 |
| MW-MB-AKM-18 ^{17, 25, 32, 46} MW-MB-SIM-10 ^{17, 25, 32, 46} | Virtual Methods and Tools - Reverse Engineering - Hybrid Modelling | | | | | | ## 2xPL ## ## | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|--|--|-------------------|---|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Field of study Power Engineering (ET) ²⁾ | | | | | | | | | | |
| Elective modules | | | | | | | | | | |
| Selection of modules amounting to 60 LP | | | | | | | | | | |
| MW-MB-18 ^{4, 9, 36} | Measurement and Automation Engineering | ## PL (4) | ## 2xPL (4) | | | | | | | 8 |
| MW-MB-19 | Extended Fundamentals for Mechanical Engineering <i>Consultation offer:</i> - Mechanism Technology - Drive Systems | ## PL ³⁾ ## ## | | | | | | | | 5 |
| MW-MB-ET-01 ^{1, 42} | Fluid Mechanics and Simulation Methods - Simulation Tools in Power Engineering - Flow Simulation for Engineering Applications - Engineering Fluid Mechanics | | | ## PVL, PL ## ## ## | | | | | | 7 |
| MW-MB-ET-02 ^{1, 9, 54} | Process Thermodynamics - Process Thermodynamics - Reaction Process Engineering | ## PL ## ## | | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|----------------------------|-------------|--------------------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-ET-03 ^{1, 42} | Fundamentals of Heat and Mass Transfer - Combustion Technology - Heat and Mass Transfer | | | ## PL ## ## | | | | | | 7 |
| MW-MB-AKM-01 ^{17, 23, 24, 32} MW-MB-KST-28 ^{17, 23, 24, 32} MW-MB-VTMB-01 ^{17, 23, 24, 32} | Fundamentals of Construction and Dynamic Dimensioning of Machines - Constructive Development Process - Machine Dynamics | ## 2xPL ## ## | | | | | | | | 7 |
| MW-MB-AKM-02 MW-MB-KST-01 | Fluid Power and Electrical Drive Systems - Basics of Fluid Power Drives and Controls - Electric Drives | | | ## PL ## ## | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|------------------------------------|------------------------|------------------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-AKM-03 | Mechanical Drives - Drive Elements - Design Document Drive Assembly | | | ## 2xPL ## ## | | | | | | 7 |
| MW-MB-PT-01¹ | Production Engineering - Manufacturing Processes - Joining Technology - Surface and Coating Technology - Forming and Remoulding Technology - Cutting and Removal Technology | ## 2xPL ## ## ## ## | | | | | | | | 7 |
| MW-MB-ET-06^{9, 17} | Fundamentals of Non-Fossil Primary Energy Use - Renewable Energy sources - Fundamentals of nuclear Energy Technology | | ## 2xPL ## ## | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|--|-------------|--|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| <u>MW-MB-ET-07</u> | Heat Exchanger, Pipings, Pressure Vessels and Energy Storage - Basics of Energy Storage Components - Pipelines, Apparatus and Containers - Heat Exchanger and Steam Generator | | ##/ 2xPL ##/ ##/ ##/ | | | | | | | 7 |
| <u>MW-MB-AKM-09</u> ^{17, 26} <u>MW-MB-KST-29</u> ^{17, 26} | Tools and Methods of Product Development - Digital MockUp in Product Development - Designing with CAD | | ##/ 2xPL ##/ ##/ | | | | | | | 7 |
| <u>MW-MB-AKM-37</u> ^{26, 32} <u>MW-MB-KST-32</u> ^{26, 32} | Methodical Product Development and Selected Tools - Digital MockUp in Product Development - Designing with CAD | | ##/ 2xPL ##/ ##/ | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|-------------|------------------------|-------------|------------------------|-------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-PT-04 ⁴⁷ | Manufacturing Processes - Advanced Course - Welding Process - Forming Process Design | | ## 2xPL ## ## | | | | | | | 7 |
| MW-MB-ET-04 ^{1, 9, 32, 42, 54} | Fundamentals of Power Machinery - Turbomachinery Basics - Fundamentals of Piston Machines | | | | ## 2xPL ## ## | | | | | 6 |
| MW-MB-ET-05 ^{1, 39, 42} | Fundamentals of Refrigeration and Air Conditioning - Basics of Refrigeration Technology - Basics of Air Conditioning Technology | | | | ## 2xPL ## ## | | | | | 6 |
| MW-MB-AKM-07 | Fluid Power Components and Systems - Sealing Technology - Fluid Power Components and Systems | | | | ## PL ## ## | | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|--|-------------|-------------|-------------|-------------|------------------------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Choice of 3 modules | | | | | | | | | | |
| MW-MB-ET-23 ^{1,9} MW-MB-LRT-33 ^{1,9} | Turbocompressors - Turbocompressor | | | | | ## PL ## | | | | 6 |
| MW-MB-ET-27 ⁹ | Cryogenics - Cryogenics | | | | | ## PL ## | | | | 6 |
| MW-MB-ET-29 ⁸ | Innovative Energy Storage Systems - Innovative Energy Storage Applications - Control and Optimisation of Energy Storage Systems | | | | | ## PL ## ## | | | | 6 |
| MW-MB-ET-41 ^{8,9} | Methods and System Concepts for Innovative Energy Storage Applications - Hybrid Storage Systems and Sector Coupling - Innovative Energy Storage Applications | | | | | ## PL ## ## | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|--|-------------|-------------|-------------|-------------|-------------|--------------------------------|-------------|-------------|--------------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Choice of 3 modules | | | | | | | | | | |
| MW- MB-ET- 08 ^{9, 32, 53} | Steam and Gas Turbines - Steam and Gas Turbines | | | | | | ## 2xPL ## | | | 6 |
| MW- MB-ET- 13 ^{9, 39, 46} | Refrigeration Systems - Refrigeration Systems and Components - Simulation of Refrigeration Systems and Components | | | | | | ## 2xPL ## ## | | | 6 |
| MW- MB-ET- 40 ^{8, 9} | Energy Storage and Energy Systems - Electrical Energy Storage - Storage and Networks (Gas) - Control Engineering Problems Relating to Energy Storage Systems and Energy Systems | | | | | | ## PL ## ## ## | | | 6 |
| MW- MB-ET- 44 ⁵³ | Thermal Turbines - Steam and Gas Turbines | | | | | | ## 2xPL ## | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|--|-------------------|----------------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Field of study Aerospace Engineering (LRT) ²⁾ | | | | | | | | | | |
| Elective modules | | | | | | | | | | |
| Selection of modules amounting to 60 LP | | | | | | | | | | |
| MW-MB-18 ^{4, 9, 36} | Measurement and Automation Engineering | ## PL (4) | ## 2xPL (4) | | | | | | | 8 |
| MW-MB-19 | Extended Fundamentals for Mechanical Engineering <i>Consultation offer:</i> - Mechanism Technology - Drive Systems | ## PL ³⁾ ## ## | | | | | | | | 5 |
| MW-MB-LRT-01 ⁹ | Fundamentals of Aerodynamics and Flight Mechanics - Aerodynamics 1 - Fundamentals of Flight Mechanics | ## PL ## ## | | | | | | | | 7 |
| MW-MB-LRT-02 ¹⁷ | Fundamentals of Aerospace Vehicles - Aircraft Design - Space Systems | | | ## PL ## ## | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|----------------------------|-------------|--------------------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-LRT-03 | Fundamentals of Aerospace Engineering - Aerospace Materials - Fluid Mechanics Fundamentals of Turbomachinery | | | ## PL ## ## | | | | | | 7 |
| MW-MB-AKM-01 ^{17, 23, 24, 32} MW-MB-KST-28 ^{17, 23, 24, 32} MW-MB-VTMB-01 ^{17, 23, 24, 32} | Fundamentals of Construction and Dynamic Dimensioning of Machines - Constructive Development Process - Machine Dynamics | ## 2xPL ## ## | | | | | | | | 7 |
| MW-MB-AKM-02 MW-MB-KST-01 | Fluid Power and Electrical Drive Systems - Basics of Fluid Power Drives and Controls - Electric Drives | ## PL ## ## | | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|--|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-ET-02 ^{1, 9, 54} | Process Thermodynamics - Process Thermodynamics - Reaction Process Engineering | ## PL ## ## | | | | | | | | 7 |
| MW-MB-ET-03 ^{1, 42} | Fundamentals of Heat and Mass Transfer - Combustion Technology - Heat and Mass Transfer | ## PL ## ## | | | | | | | | 7 |
| MW-MB-PT-01 ¹ | Production Engineering - Manufacturing Processes - Joining Technology - Surface and Coating Technology - Forming and Remoulding Technology - Cutting and Removal Technology | ## 2xPL ## ## ## ## | | | | | | | | 7 |
| MW-MB-LRT-04 | Fundamentals of Flight Propulsion - Gas Dynamics - Aircraft Propulsion 1 | | ## PL ## ## | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|--|-------------|--------------------------------------|-------------|-------------------------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-LRT-05 | Numerical Methods of Fluid Mechanics and Structural Mechanics - Finite Element Method - Computational Fluid Dynamics | | ##/ PVL, PL ##/ ##/ | | | | | | | 7 |
| MW-MB-AKM-37^{26, 32} MW-MB-KST-32^{26, 32} | Methodical Product Development and Selected Tools - Digital MockUp in Product Development - Designing with CAD | | ##/ 2xPL ##/ ##/ | | | | | | | 7 |
| MW-MB-LRT-06^{17, 46} | Aircraft Design - Aircraft Design 1 - Numerical Tools for Aircraft Design | | | | ##/ 2xPL ##/ ##/ | | | | | 6 |
| MW-MB-LRT-09¹ MW-MB-LB-11¹ | Vibration Technology and Structural Durability - Operational Strength - Vibration Technology | | | | ##/ PL ##/ ##/ | | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|--|-------------|-------------|-------------|---------------------------|----------------------------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-AKM-18 ^{17, 25, 32, 46} MW-MB-SIM-10 ^{17, 25, 32, 46} | Virtual Methods and Tools - Reverse Engineering - Hybrid Modelling | | | | ### 2xPL ### ### | | | | | 6 |
| Choice of 3 modules | | | | | | | | | | |
| MW-MB-LRT-24 ^{9, 17, 46} MW-MB-SIM-22 ^{9, 17, 46} | Aeroelastics - Basics of Aeroelasticity - Aeroelasticity Design Project - Structure-flow Coupling | | | | | ### 2xPL ### ### ### | | | | 6 |
| MW-MB-LRT-25 ⁹ | Communication Navigation Surveillance (CNS) - Communication Surveillance - Navigation | | | | | ### PL ### ### | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|-------------|-------------|-------------|-------------|----------------------------|------------------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-ET-23 ^{1, 9} MW-MB-LRT-33 ^{1, 9} | Turbocompressors - Turbocompressor | | | | | ## PL ## | | | | 6 |
| MW-MB-LRT-34 ^{9, 46} | Fundamentals of Flight Operations within the Modern Cockpit - Air Traffic Facilities, Operations and Air Traffic Control - Cockpit Technologies | | | | | ## 2xPL ## ## | | | | 6 |
| Choice of 3 modules | | | | | | | | | | |
| MW-MB-LRT-14 ^{17, 46} | Aircraft Structures - Aircraft Design Project - Aircraft Design 2 | | | | | | ## 2xPL ## ## | | | 6 |
| MW-MB-LRT-15 ⁴⁶ | Aerodynamics of Aircraft - Aerodynamics 2 - Flow Practical Course | | | | | | ## 2xPL ## ## | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|------------------------------|--|-------------|-------------|-------------|-------------|-------------|------------------------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-LRT-16 | Aircraft Manufacturing - Introduction to Aircraft Production - Special Manufacturing Processes | | | | | | ## PL ## ## | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|--|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Field of study Production Engineering (PT) ²⁾ | | | | | | | | | | |
| Elective modules | | | | | | | | | | |
| Selection of modules amounting to 60 LP | | | | | | | | | | |
| MW-MB-18 ⁴ , 9.36 | Measurement and Automation Engineering | ## PL (4) | ## 2xPL (4) | | | | | | | 8 |
| MW-MB-19 | Extended Fundamentals for Mechanical Engineering <i>Consultation offer:</i> - Mechanism Technology - Drive Systems | ## PL ³⁾ ## ## | | | | | | | | 5 |
| MW-MB-PT-01 ¹ | Production Engineering - Manufacturing Processes - Joining Technology - Surface and Coating Technology - Forming and Remoulding Technology - Cutting and Removal Technology | ## 2xPL ## ## ## ## | | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|--|----------------------------|-------------|----------------------------|-------------|-------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-PT-02 ⁵⁴ | Production Engineering - Manufacturing and Planning - Occupational Science - Production Planning - Production and Logistics | | | ## PL ## ## ## | | | | | | 7 |
| MW-MB-PT-03 | Production Engineering - Machine Tools and Production Automatization - Production Automation - Machine Tools - Basics | | | ## PL ## ## | | | | | | 7 |
| MW-MB-AKM-01 ^{17, 23, 24, 32} MW-MB-KST-28 ^{17, 23, 24, 32} MW-MB-VTMB-01 ^{17, 23, 24, 32} | Fundamentals of Construction and Dynamic Dimensioning of Machines - Constructive Development Process - Machine Dynamics | ## 2xPL ## ## | | | | | | | | 7 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|--|--|-------------|----------------------|----------------------------|--------------------------------|-------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-AKM-02 MW-MB-KST-01 | Fluid Power and Electrical Drive Systems - Basics of Fluid Power Drives and Controls - Electric Drives | | | ## PL ## ## | | | | | | 7 |
| MW-MB-AKM-03 | Mechanical Drives - Drive Elements - Design Document Drive Assembly | | | ## 2xPL ## ## | | | | | | 7 |
| MW-MB-PT-04 ⁴⁷ | Manufacturing Processes - Advanced Course - Welding Process - Forming Process Design | | ## PL ## ## | | | | | | | 7 |
| MW-MB-PT-06 | Development of Machine Tools - Building Group Design - Controlled Drives | | ## PL ## ## | | | | | | | 7 |
| MW-MB-PT-08 ^{47, 53} | Production Planning - Advanced Course - Production Planning - Assembly - Production Planning - Parts Production | | | | ## 2xPL ## ## | | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|---|-------------|-------------|-------------|--------------------------------|----------------------------|-------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| MW-MB-PT-09 ^{1, 46} | Laser and Plasma Technology - Laser Technology - Plasma Technology | | | | ## 2xPL ## ## | | | | | 6 |
| MW-MB-PT-33 ⁵³ | Production Planning - Parts Production and Assembly - Production Planning - Assembly - Production Planning - Parts Production | | | | ## 2xPL ## ## | | | | | 6 |
| Choice of 3 modules | | | | | | | | | | |
| MW-MB-PT-24 ⁴⁷ | Weldability - Welding Production and Microjoining Technology - Weld Calculation and Design | | | | | ## 2xPL ## ## | | | | 6 |
| MW-MB-PT-25 ^{46, 47} | Assembly and Robotics - Handling and Robotics - Assembly Technology and Systems | | | | | ## 2xPL ## ## | | | | 6 |
| MW-MB-PT-27 | Tools of Forming and Cutting/Splitting Technology - Forming and Cutting Technology Machines - Tool Design and Production | | | | | ## PL ## ## | | | | 6 |

| Module no. | Module name | 1. Semester | 2. Semester | 3. Semester | 4. Semester | 5. Semester | 6. Semester | 7. Semester | 8. Semester | LP |
|---|--|-------------|-------------|-------------|-------------|-------------|----------------------------|-------------|-------------|----|
| | | K/P | K/P | K/P | K/P | K/P | K/P | K/P | K/P | |
| Choice of 3 modules | | | | | | | | | | |
| MW-MB-PT-14 ⁴⁷ | Joinability - Adhesive Bonding Technology - Soldering Technology - Mechanical Joining | | | | | | ## PL ## ## ## | | | 6 |
| MW-MB-PT-16 | Methods to Simulate and Design Part Made by Prototyping, Blanking, and Forming Technology - Forming and Cutting Technology - Original Mould Technology | | | | | | ## PL ## ## | | | 6 |
| MW-MB-PT-20 ⁴⁶ | Conceptual Design of Machine Tools - Fundamentals of WZM Design - Exercise Conceptual Design | | | | | | ## PL ## ## | | | 6 |

Legende

| | |
|-----|---|
| V | Lecture ^{*)} |
| Ü | Exercise ^{*)} |
| P | Practical course |
| PL | Exam performance(s) |
| PVL | Preliminary examination(s) |
| LP | Credit Points - in brackets () pro rata allocation to individual semesters according to Workload |
| 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.

- 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.

8 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.

9 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.

17 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.

23 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.

24 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.

25 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.

26 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.

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.

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.

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.

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.

- 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.
- 52 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.
- 53 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.
- 54 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.