

Exclosure to Subject Specific Regulations from 18.07.2018
 for Master-Programme Theoretischer Maschinenbau
 at TUHH
 Programme Director: Prof. Robert Seifried
 Total: 120 CP
 Number of Specialisations to choose: 1

Course Scheme Master Theoretical Mechanical Engineering (TMBMS)

Consolidated Version
 for Study Cohort: WiSe17/18
 according to Decision of Academic Senate: 25.07.2018
 and Approval of Chair from: 22.08.2018
 Replaces Version from: 26.04.2017
 In Force on: 01.10.2018
 Out of Force on: 30.09.2020

| Re com. Term | Module Name (German / English) | Module | | | | | Exam nation | | |
|--|---|----------|-----------------------|-----------|----------|-----------|-------------|--|---------------------|
| | | Language | Module Responsibility | Institute | C/EC (1) | CM/OM (2) | CP (4) | Grade | Exam nation Form(3) |
| Core qualification Compulsory Courses: 48 LP Optional Courses: 24 LP | | | | | | | | | |
| 1 | Finite-Elemente-Methoden / Finite Elements Methods | EN | Prof. von Estorff | M-16 | C | CM | 6 | Y | KL |
| 1 | Theorie und Entwurf regelungstechnischer Systeme / Control Systems Theory and Design | EN | Prof. Wemer | E-14 | C | CM | 6 | Y | KL |
| 1 | Modellierung und Optimierung in der Dynamik / Modelling and Optimization in Dynamics | DE | Prof. Seifried | M-13 | EC | CM | 6 | Y | MP |
| 1 | Regelungstechnisches Praktikum A / Control Lab A | EN | Prof. Wemer | E-14 | EC | CM | 4 | N | SA |
| 1 | Regelungstechnisches Praktikum C / Control Lab C | EN | Prof. Wemer | E-14 | EC | CM | 3 | N | SA |
| 1 | Technische Schwingungslehre / Vibration Theory | DE / EN | Prof. Hoffmann | M-14 | EC | CM | 6 | Y | KL |
| 1 | Technischer Ergänzungskurs Kernfächer für TMBMS (laut FSPO) / Technical Complementary Course Core Studies for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | CM | 6 | Y | It. FSPO |
| 2 | Numerik gewöhnlicher Differentialgleichungen / Numerical Treatment of Ordinary Differential Equations | DE / EN | Prof. Le Bome | E-10 | C | CM | 6 | Y | KL |
| 2 | Technische Dynamik: Numerische und experimentelle Methoden / Applied Dynamics: Numerical and experimental methods | DE | Prof. Seifried | M-13 | C | CM | 6 | Y | KL |
| 2 | Boundary-Elemente-Methoden / Boundary Element Methods | EN | Prof. von Estorff | M-16 | EC | CM | 6 | Y | KL |
| 2 | Entwurfsoptimierung und probabilistische Verfahren in der Strukturmechanik / Design optimization and probabilistic approaches in structural analysis | DE | Prof. Kriegesmann | M-EXK1 | EC | CM | 6 | Y | SA |
| 2 | High-Order FEM / High-Order FEM | EN | Prof. Düster | M-10 | EC | CM | 6 | Y | KL |
| 2 | Humanoide Robotik / Humanoid Robotics | DE | Prof. Wemer | E-14 | EC | CM | 2 | Y | RE |
| 2 | Lineare und Nichtlineare Systemidentifikation / Linear and Nonlinear System Identification | EN | Prof. Wemer | E-14 | EC | CM | 3 | Y | MP |
| 2 | Molekulare Modellierung und Numerische Strömungssimulation / Molecular Modeling and Computational Fluid Dynamics | EN | Prof. Schlüter | V-5 | EC | CM | 6 | Y | MP |
| 2 | Nichtlineare Dynamik / Nonlinear Dynamics | DE / EN | Prof. Hoffmann | M-14 | EC | CM | 6 | Y | KL |
| 2 | Numerische Methoden der Thermofluiddynamik II / Computational Fluid Dynamics II | DE / EN | Prof. Rung | M-8 | EC | CM | 6 | Y | MP |
| 2 | Numerische Strukturdynamik / Computational Structural Dynamics | DE | Prof. Düster | M-10 | EC | CM | 6 | Y | KL |
| 2 | Optimale und robuste Regelung / Optimal and Robust Control | EN | Prof. Wemer | E-14 | EC | CM | 6 | Y | MP |
| 3 | Studienarbeit Theoretischer Maschinenbau / Research Project Theoretical Mechanical Engineering | | Dozenten des SD M | SD-M | C | CM | 12 | Y | STA |
| 3 | Ausgewählte Themen der Mehrkörperdynamik und Robotik / Selected Topics in Multibody Dynamics and Robotics | DE / EN | Prof. Seifried | M-13 | EC | CM | 6 | Y | RE |
| 3 | Ausgewählte Themen der Regelungstechnik / Advanced Topics in Control | EN | Prof. Wemer | E-14 | EC | CM | 6 | Y | MP |
| 3 | Kontinuumsmechanik / Continuum Mechanics | DE / EN | Prof. Cyron | M-15 | EC | CM | 6 | Y | KL |
| 3 | Nichtlineare Strukturanalyse / Nonlinear Structural Analysis | DE / EN | Prof. Düster | M-10 | EC | CM | 6 | Y | KL |
| 1-3 | Nichttechnische Ergänzungskurse im Master / Nontechnical Elective Complementary Courses for Master | DE / EN | Richter | 0-TUHH | C | OM | 6 | Selection out of seperatly published Catalogue | |
| 1-3 | Betrieb & Management / Business & Management | DE / EN | Prof. Meyer | W-1 | C | OM | 6 | Selection out of seperatly published Catalogue | |
| Specialisation Bio- and Medical Technology Compulsory Courses: 0 LP Optional Courses: 18 LP | | | | | | | | | |
| 1 | Angewandte Statistik für Ingenieure / Applied Statistics | DE / EN | Prof. Morlock | M-3 | EC | CM | 6 | Y | KL |

| Re com. Term | Module Name (German / English) | Module | | | | | Examination | | | |
|--------------|--|----------|-----------------------|-----------|----------|-----------|-------------|---|---------------------|--|
| | | Language | Module Responsibility | Institute | C/EC (1) | CM/OM (2) | CP (4) | Grade | Examination Form(3) | |
| 1 | BIO II: Biomaterialien / BIO II: Biomaterials | EN | Prof. Morlock | M-3 | EC | CM | 3 | Y | KL | |
| 2 | Angewandte Humanoide Robotik / Applied Humanoid Robotics | DE / EN | Prof. Wemer | E-14 | EC | CM | 6 | N | SA | |
| 2 | Bildgebende Systeme in der Medizin / Medical Imaging Systems | DE | Dr. Grass | M-3 | EC | CM | 6 | Y | KL | |
| 2 | BIO II: Gelenkersatz / BIO II: Artificial Joint Replacement | DE | Prof. Morlock | M-3 | EC | CM | 3 | Y | KL | |
| 2 | Robotik und Navigation in der Medizin / Robotics and Navigation in Medicine | EN | Prof. Schlaefer | E-1 | EC | CM | 6 | Y | KL | |
| 3 | Intelligente Systeme in der Medizin / Intelligent Systems in Medicine | EN | Prof. Schlaefer | E-1 | EC | CM | 6 | Y | KL | |
| 3 | Medizinelektronik / Electronic Circuits for Medical Applications | EN | Prof. Kuhl | E-9 | EC | CM | 6 | Y | MP | |
| 3 | Mikrosystemtechnik / Microsystem Engineering | EN | Prof. Kasper | E-7 | EC | CM | 6 | Y | KL | |
| 3 | Numerische Verfahren in der medizinischen Bildgebung / Numerical Methods for Medical Imaging | DE | Prof. Knopp | E-5 | EC | CM | 6 | Y | KL | |
| 3 | Technischer Ergänzungskurs für TMBMS (laut FSPO) / Technical Elective Course for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | OM | 6 | according to Subject Specific Regulations | | |

Specialisation Energy Systems Compulsory Courses: 0 LP Optional Courses: 18 LP

| | | | | | | | | | |
|---|--|---------|-------------------|------|----|----|---|---|----|
| 1 | Kernkraftwerke und Dampfturbinen / Nuclear Power Plants and Steam Turbines | DE | Prof. Kather | M-5 | EC | CM | 6 | Y | KL |
| 1 | Wärmetechnik / Thermal Engineering | DE | Prof. Schmitz | M-21 | EC | CM | 6 | Y | KL |
| 2 | Klimaanlagen / Air Conditioning | DE | Prof. Schmitz | M-21 | EC | CM | 6 | Y | KL |
| 2 | Kraft-Wärme-Kopplung und Verbrennungstechnik / Combined Heat and Power and Combustion Technology | DE | Prof. Kather | M-5 | EC | CM | 6 | Y | KL |
| 2 | Solarenergienutzung / Use of Solar Energy | DE | Prof. Kaltschmitt | V-9 | EC | CM | 6 | Y | KL |
| 2 | Technischer Ergänzungskurs für TMBMS (laut FSPO) / Technical Elective Course for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | OM | 6 | according to Subject Specific Regulations | |
| 3 | Energieinformationssysteme und Elektromobilität / Energy Information Systems and Electromobility | DE | Prof. Kaltschmitt | V-9 | EC | CM | 6 | Y | MP |
| 3 | Energetechnik auf Schiffen / Marine Power Engineering | DE | Prof. Wirz | M-12 | EC | CM | 6 | Y | KL |
| 3 | Innovative Methoden der Numerischen Themofluidodynamik / Innovative CFD Approaches | DE / EN | Prof. Rung | M-8 | EC | CM | 6 | Y | MP |
| 3 | Strömungsmechanik und Meeresenergie / Fluid Mechanics and Ocean Energy | DE | Prof. Schlüter | V-5 | EC | CM | 6 | Y | KL |

Specialisation Aircraft Systems Engineering Compulsory Courses: 0 LP Optional Courses: 18 LP

| | | | | | | | | | |
|-----|--|---------|-----------------|------|----|----|---|---|----|
| 1 | Flugzeugsysteme I / Aircraft Systems I | DE | Prof. Thielecke | M-7 | EC | CM | 6 | Y | KL |
| 1-2 | Ausgewählte Themen der Flugzeug-Systemtechnik / Aircraft Systems Engineering | DE / EN | Prof. Thielecke | M-7 | EC | OM | 6 | Selection out of Catalogue below | |
| 1-2 | Entwurf von Kabinensystemen / Cabin Systems Engineering | DE | Prof. God | M-25 | EC | CM | 6 | Y | KL |
| 1-2 | Methoden des Flugzeugentwurfs / Aircraft Design | DE / EN | Prof. Gollnick | M-28 | EC | CM | 6 | Y | KL |
| 2 | Flugzeugsysteme II / Aircraft Systems II | DE | Prof. Thielecke | M-7 | EC | CM | 6 | Y | KL |
| 2 | Systems Engineering / Systems Engineering | DE | Prof. God | M-25 | EC | CM | 6 | Y | KL |
| 2 | Technischer Ergänzungskurs für TMBMS (laut FSPO) / Technical Elective Course for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | OM | 6 | according to Subject Specific Regulations | |
| 2-3 | Flugphysik / Flight Physics | DE | Prof. Thielecke | M-7 | EC | CM | 6 | Y | KL |
| 3 | Avionik sicherheitskritischer Systeme / Avionics for safety-critical Systems | DE | Dr. Halle | M-7 | EC | CM | 6 | Y | MP |
| 3 | Flugzeug-Kabinensysteme / Aircraft Cabin Systems | DE | Prof. God | M-25 | EC | CM | 6 | Y | KL |

Specialisation Maritime Technology Compulsory Courses: 0 LP Optional Courses: 18 LP

| | | | | | | | | | |
|-----|---|---------|---------------------|------|----|----|---|---|----|
| 1-2 | Maritime Technik und meeresrechtliche Systeme / Maritime Technology and Maritime Systems | DE | Prof. Abdel-Maksoud | M-8 | EC | CM | 6 | Y | KL |
| 1-2 | Schiffshilfsanlagen / Marine Auxiliaries | DE | Prof. Wirz | M-12 | EC | CM | 6 | Y | MP |
| 2 | Hafenbau und Hafenplanung / Harbour Engineering and Harbour Planning | DE | Prof. Fröhle | B-10 | EC | CM | 6 | Y | KL |
| 2 | Hafenlogistik / Port Logistics | DE | Prof. Jahn | W-12 | EC | CM | 6 | Y | KL |
| 2 | Marine Geotechnik und Numerik / Marine Geotechnics and Numerics | DE | Prof. Grabe | B-5 | EC | CM | 6 | Y | KL |
| 2 | Maritimer Transport / Maritime Transport | DE | Prof. Jahn | W-12 | EC | CM | 6 | Y | KL |
| 2 | Schiffsmotorenanlagen / Marine Diesel Engine Plants | DE | Prof. Wirz | M-12 | EC | CM | 6 | Y | MP |
| 3 | Eistechnik / Arctic Technology | DE / EN | Prof. Ehlers | M-10 | EC | CM | 6 | Y | MP |
| 3 | Lineare und Nichtlineare Wellen / Linear and Nonlinear Waves | DE / EN | Prof. Höfmann | M-14 | EC | CM | 6 | Y | KL |
| 3 | Manövrierfähigkeit und Schiffshydrodynamik beschränkter Gewässer / Manoeuvrability and Shallow Water Ship Hydrodynamics | DE / EN | Prof. Abdel-Maksoud | M-8 | EC | CM | 6 | Y | KL |
| 3 | Schiffssicherheit / Ship Safety | DE | Prof. Krüger | M-6 | EC | CM | 6 | Y | KL |

| Re com. Term | Module Name (German / English) | Module | | | | | Examination | | |
|--------------|--|----------|-------------------------|-----------|----------|-----------|-------------|---|---------------------|
| | | Language | Module Responsibility | Institute | C/EC (1) | CM/OM (2) | CP (4) | Grade | Examination Form(3) |
| 3 | Schiffsvibrationen / Ship Vibration | EN | Dr. von Bock und Polach | M-10 | EC | CM | 6 | Y | KL |
| 3 | Technischer Ergänzungskurs für TMBMS (laut FSPO) / Technical Elective Course for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | OM | 6 | according to Subject Specific Regulations | |
| 3-4 | Ausgewählte Themen der Schiffs- und Meerestechnik / Selected topics in Naval Architecture and Ocean Engineering | DE / EN | Prof. Ehlers | M-10 | EC | OM | 6 | Selection out of Catalogue below | |

Specialisation Numerics and Computer Science Compulsory Courses: 0 LP Optional Courses: 18 LP

| | | | | | | | | | |
|---|--|---------|------------------|--------|----|----|---|---|----|
| 1 | Entwurf und Implementierung von Software-Systemen / Design and Implementation of Software Systems | EN | Prof. Renner | E-EXK2 | EC | CM | 6 | Y | KL |
| 1 | Prozessautomatisierungstechnik / Industrial Process Automation | EN | Prof. Schlaefer | E-1 | EC | CM | 6 | Y | KL |
| 1 | Verteilte Algorithmen / Distributed Algorithms | DE / EN | Prof. Turau | E-17 | EC | CM | 6 | Y | MP |
| 2 | Approximation und Stabilität / Approximation and Stability | DE / EN | Prof. Lindner | E-10 | EC | CM | 6 | Y | MP |
| 2 | Hochleistungsrechnen / High-Performance Computing | DE / EN | Prof. Rung | M-8 | EC | CM | 6 | Y | KL |
| 2 | Maschinelles Lernen und Data Mining / Machine Learning and Data Mining | EN | NN | E-16 | EC | CM | 6 | Y | KL |
| 2 | Mustereerkennung und Datenkompression / Pattern Recognition and Data Compression | EN | Prof. Grigat | E-2 | EC | CM | 6 | Y | KL |
| 2 | Numerische Algorithmen in der Strukturmechanik / Numerical Algorithms in Structural Mechanics | DE | Prof. Düster | M-10 | EC | CM | 6 | Y | KL |
| 2 | Numerische Mathematik II / Numerical Mathematics II | DE / EN | Prof. Le Bome | E-10 | EC | CM | 6 | Y | MP |
| 2 | Technischer Ergänzungskurs für TMBMS (laut FSPO) / Technical Elective Course for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | OM | 6 | according to Subject Specific Regulations | |
| 3 | 3D Computer Vision / 3D Computer Vision | EN | Prof. Grigat | E-2 | EC | CM | 6 | Y | KL |
| 3 | Digitale Bildanalyse / Digital Image Analysis | EN | Prof. Grigat | E-2 | EC | CM | 6 | Y | KL |
| 3 | Digitale Signalverarbeitung und Digitale Filter / Digital Signal Processing and Digital Filters | EN | Prof. Bauch | E-8 | EC | CM | 6 | Y | KL |
| 3 | Effiziente Algorithmen / Efficient Algorithms | DE | Prof. Rump | E-19 | EC | CM | 6 | Y | KL |
| 3 | Hierarchische Algorithmen / Hierarchical Algorithms | DE / EN | Prof. Le Bome | E-10 | EC | CM | 6 | Y | MP |
| 3 | Intelligente Autonome Agenten und kognitive Robotik / Intelligent Autonomous Agents and Cognitive Robotics | EN | Marone | E-16 | EC | CM | 6 | Y | KL |
| 3 | Mathematische Bildverarbeitung / Mathematical Image Processing | DE / EN | Prof. Lindner | E-10 | EC | CM | 6 | Y | MP |
| 3 | Matrixalgorithmen / Matrix Algorithms | DE | Dr. Zemke | E-10 | EC | CM | 6 | Y | MP |
| 3 | Numerik partieller Differentialgleichungen / Numerics of Partial Differential Equations | DE / EN | Prof. Le Bome | E-10 | EC | CM | 6 | Y | MP |
| 3 | Soft-Computing / Soft Computing | DE / EN | Prof. Zimmermann | E-13 | EC | CM | 6 | Y | MP |
| 3 | Wissenschaftliches Rechnen und Genauigkeit / Scientific Computing and Accuracy | DE | Prof. Rump | E-19 | EC | CM | 6 | Y | MP |

Specialisation Product Development and Production Compulsory Courses: 0 LP Optional Courses: 18 LP

| | | | | | | | | | |
|-----|--|---------|-------------------|------|----|----|---|---|----|
| 1 | Methoden der integrierten Produktentwicklung / Methods of Integrated Product Development | DE | Prof. Krause | M-17 | EC | CM | 6 | Y | MP |
| 1 | Produktionsplanung und -steuerung und Digitales Unternehmen / Production Planning & Control and Digital Enterprise | DE | Prof. Lödding | M-18 | EC | CM | 6 | Y | KL |
| 1 | Produktplanung / Product Planning | EN | Prof. Herstatt | W-7 | EC | CM | 6 | Y | KL |
| 1 | Technischer Ergänzungskurs für TMBMS (laut FSPO) / Technical Elective Course for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | OM | 6 | according to Subject Specific Regulations | |
| 2 | Ausgewählte Themen der Schwingungslehre / Advanced Topics in Vibration | DE / EN | Prof. Hoffmann | M-14 | EC | CM | 6 | Y | KL |
| 2 | Methodisches Konstruieren / Mechanical Design Methodology | DE | Prof. Schlattmann | G-2 | EC | CM | 6 | Y | MP |
| 2 | Technische Akustik I (Akustische Wellen, Lärmschutz, Psychoakustik) / Technical Acoustics I (Acoustic Waves, Noise Protection, Psycho Acoustics) | EN | Prof. von Estorff | M-16 | EC | CM | 6 | Y | KL |
| 3 | Fabrikplanung & Produktionslogistik / Factory Planning & Production Logistics | DE | Prof. Kreuzfeldt | W-6 | EC | CM | 6 | Y | KL |
| 3 | Fluidtechnik / Fluidics | DE | Prof. Krause | M-17 | EC | CM | 6 | Y | KL |
| 3 | Lasersysteme und Methoden der Fertigungsprozessauslegung und -analyse / Laser systems and methods of manufacturing design and analysis | DE / EN | Prof. Hintze | M-18 | EC | CM | 6 | Y | KL |
| 3 | Robotik / Robotics | EN | Prof. Weltin | M-24 | EC | CM | 6 | Y | KL |
| 3 | Technische Akustik II (Raumakustik, Berechnungsverfahren) / Technical Acoustics II (Room Acoustics, Computational Methods) | EN | Prof. von Estorff | M-16 | EC | CM | 6 | Y | MP |
| 3-4 | Automatisierungstechnik und -systeme / Automation Technology and Systems | DE | Prof. Schöppstuhl | M-23 | EC | CM | 6 | Y | KL |

Specialisation Materials Science Compulsory Courses: 0 LP Optional Courses: 18 LP

| | | | | | | | | | |
|---|--|---------|---------------|------|----|----|---|---|----|
| 1 | Kunststoffe / Polymers | DE / EN | Dr. Wittich | M-11 | EC | CM | 6 | Y | KL |
| 2 | Faser-Kunststoff-Verbunde / Fibre-polymer-composites | EN | Prof. Fiedler | M-11 | EC | CM | 6 | Y | KL |

| Module | | | | | | | Exami nation | | |
|--|--|----------|-----------------------|-----------|----------|-----------|--------------|---|----------------------|
| Re com. Term | Module Name (German / English) | Language | Module Responsibility | Institute | C/EC (1) | CM/OM (2) | CP (4) | Grade | Exami nation Form(3) |
| 2 | Phänomene und Methoden der Materialwissenschaften / Phenomena and Methods in Materials Science | DE / EN | Prof. Huber | M-22 | EC | CM | 6 | Y | KL |
| 2 | Skalenübergreifende Modellierung / Modeling Across The Scales | DE / EN | Prof. Bargmann | M-15 | EC | CM | 6 | Y | MP |
| 2 | Technischer Ergänzungskurs für TMBMS (laut FSPO) / Technical Elective Course for TMBMS (according to Subject Specific Regulations) | | Prof. Seifried | M-13 | EC | OM | 6 | according to Subject Specific Regulations | |
| 3 | Materialphysik und atomare Materialmodellierung / Materials Physics and Atomistic Materials Modeling | DE / EN | Prof. Huber | M-22 | EC | CM | 6 | Y | KL |
| 3 | Modeme Funktionsmaterialien / Advanced Functional Materials | DE / EN | Prof. Huber | M-22 | EC | CM | 6 | Y | RE |
| 3 | Ringvorlesung: Multiskalenmaterialien / Lecture: Multiscale Materials | DE | Prof. Schneider | M-9 | EC | CM | 6 | Y | RE |
| Thesis Compulsory Courses: 30 LP Optional Courses: 0 LP | | | | | | | | | |
| 4 | Masterarbeit / Master Thesis | | Professoren der TUHH | 0-TUHH | C | CM | 30 | Y | AB |

Aircraft Systems Engineering

| Course | | | | | Exami nation | | | |
|--|-------------------|--------------|---------|---------|--------------|-------|----------------------|---|
| Course Name (German / English) | Course Form LV(5) | Language (6) | SWS (7) | Sem. LV | CP (4) | Grade | Exami nation Form(3) | Additional information |
| Entwurfsoptimierung und Probabilistische Verfahren in der Strukturmechanik / Design Optimization and Probabilistic Approaches in Structural Analysis | SE | DE | 3 | SoSe | 3 | Y | SA | |
| Ermüdung und Schadenstoleranz / Fatigue & Damage Tolerance | VL | EN | 2 | WiSe | 3 | Y | MP | |
| Leichtbau mit Faserverbundwerkstoffen - Strukturmechanik / Lightweight Construction with Fibre Reinforced Polymers - Structural Mechanics | VL | DE | 2 | WiSe | 2 | Y | MP | |
| Leichtbau mit Faserverbundwerkstoffen - Strukturmechanik / Lightweight Construction with Fibre Reinforced Polymers - Structural Mechanics | VL | DE | 2 | WiSe | 3 | Y | MP | Replaces "Lightweight Construction with Fibre Reinforced Polymers - Structural Mechanics (VL)" from WiSe18/19 |
| Leichtbau mit Faserverbundwerkstoffen - Strukturmechanik / Lightweight Construction with Fibre Reinforced Polymers - Structural Mechanics | HÜ | DE | 1 | WiSe | 1 | Y | MP | |
| Leichtbaupraktikum / Lightweight Design Practical Course | PBL | DE/EN | 3 | SoSe | 3 | Y | MP | |
| Luftsicherheit / Aviation Security | VL | DE | 2 | WiSe | 2 | Y | KL | |
| Luftsicherheit / Aviation Security | UE | DE | 1 | WiSe | 1 | Y | KL | |
| Mechanismen, Systeme und Verfahren der Werkstoffprüfung / Mechanisms, Systems and Processes of Materials Testing | VL | DE | 2 | SoSe | 2 | Y | KL | |
| Strahltriebwerke / Turbo Jet Engines | VL | DE | 2 | WiSe | 3 | Y | MP | |
| Systemanalyse im Lufttransport / System Analysis in Air Transportation | VL | DE | 3 | WiSe | 3 | Y | KL | |
| Werkstoffprüfung / Materials Testing | VL | DE | 2 | WiSe | 2 | Y | KL | |
| Zuverlässigkeit in der Maschinendynamik / Reliability in Engineering Dynamics | VL | EN | 2 | SoSe | 2 | Y | KL | |
| Zuverlässigkeit in der Maschinendynamik / Reliability in Engineering Dynamics | UE | EN | 1 | SoSe | 2 | Y | KL | |
| Zuverlässigkeit von Avionik-Baugruppen / Reliability of avionics assemblies | VL | DE | 2 | SoSe | 2 | Y | KL | |
| Zuverlässigkeit von Avionik-Baugruppen / Reliability of avionics assemblies | UE | DE | 1 | SoSe | 1 | Y | KL | |
| Zuverlässigkeit von Flugzeugsystemen / Reliability of Aircraft Systems | VL | DE | 2 | WiSe | 3 | Y | KL | |

Selected topics in Naval Architecture and Ocean Engineering

| Course | | | | | Exami nation | | | |
|--|-------------------|--------------|---------|---------|--------------|-------|----------------------|------------------------|
| Course Name (German / English) | Course Form LV(5) | Language (6) | SWS (7) | Sem. LV | CP (4) | Grade | Exami nation Form(3) | Additional information |
| Ausrüstung und Betrieb von Offshore-Spezialschiffen / Outfitting and Operation of Special Purpose Offshore Ships | VL | DE | 2 | SoSe | 3 | Y | MP | |
| Entwerfen von Unterwasserfahrzeugen / Design of Underwater Vessels | VL | DE | 2 | SoSe | 3 | Y | MP | |
| Lattice-Boltzmann-Methoden für die Simulation von Strömungen mit freien Oberflächen / Lattice-Boltzmann methods for the simulation of free surface flows | VL | DE/EN | 2 | WiSe | 3 | Y | MP | |
| Modellierung und Simulation maritimer Systeme / Modeling and Simulation of Maritime Systems | PBL | DE/EN | 2 | SoSe | 3 | Y | MP | |
| Offshore-Windkraftparks / Offshore Wind Parks | VL | DE | 2 | WiSe | 3 | Y | MP | |
| Schiffakustik / Ship Acoustics | VL | DE | 2 | SoSe | 3 | Y | MP | |
| Schiffsdynamik / Ship Dynamics | VL | DE | 2 | SoSe | 3 | Y | KL | |

| Course | | | | | Examination | | | |
|--|----------------------|--------------|---------|------------|-------------|-------|------------------------|------------------------|
| Course Name (German / English) | Course Form LV(5) | Language (6) | SWS (7) | Sem. LV | CP (4) | Grade | Examination Form(3) | Additional information |
| Spezielle Gebiete der Experimentellen und Theoretischen Fluidodynamik / Selected Topics of Experimental and Theoretical Fluid Dynamics | VL | DE | 2 | WiSe | 3 | Y | MP | |
| Technik und Strömungsmechanik von Segelschiffen / Technical Elements and Fluid Mechanics of Sailing Ships | VL | DE/EN | 2 | WiSe | 3 | Y | MP | |
| Technik von Überwassermarinefahrzeugen / Technology of Naval Surface Vessels | VL | DE | 2 | WiSe | 3 | Y | MP | |

Explanation:

¹C=Compulsory, EC=Elective Compulsory

²CM=Compulsory Defined Module, OM=Optional Defined Module

³KL=Written exam, SA=Written elaboration, FFA=Subject theoretical and practical work, FFST=Subject theoretical and practical work, MP=Oral exam, RE=Presentation, STA=Study work, GD=Group discussion, ÜA=Exercises, AB=Thesis, It. FSPO=according to Subject Specific Regulations

⁴CP=Credit Points

⁵VL=Lecture, SE=Seminar, UE=Recitation Section (small), PBL=Project-/problem-based Learning, PR=Practical Course, PS=Project Seminar, FL=Laboratory, HÜ=Recitation Section (large)

⁶DE=German, EN=English, DE/EN=German and English

⁷SWS=Contact hours