

Course Scheme Master

Naval Architecture and Ocean Engineering (SBMS)

| Re com. Term | Module Name (German) | Modul Name (English) | Institute | C/EC (1) | CM/OM (2) | Grade | Examination Form(3) | CP (4) | Course Name (German) | Course Name (English) | Course Form LV(5) | Language (6) | SWS (7) | Sem. LV |
|---|---|--|-----------|----------|-----------|-------|---------------------|--------|---|--|-------------------|--------------|---------|---------|
| Core qualification Compulsory Courses: 54 LP Optional Courses: 36 LP | | | | | | | | | | | | | | |
| 1 | Schiffssicherheit | Ship Safety | M-6 | C | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Schiffssicherheit | Ship Safety | VL | DE | 2 | 1 |
| | | | | | | | | | Schiffssicherheit | Ship Safety | HÜ | DE | 2 | 1 |
| 1 | Schiffsvibrationen | Ship Vibration | M-10 | C | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Schiffsvibrationen | Ship Vibration | VL | EN | 2 | 1 |
| | | | | | | | | | Schiffsvibrationen | Ship Vibration | UE | EN | 2 | 1 |
| 1 | Strukturanalyse von Schiffen und meerestechnischen Konstruktionen | Structural Analysis of Ships and Offshore Structures | M-10 | C | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Strukturanalyse von Schiffen und meerestechnischen Konstruktionen | Structural Analysis of Ships and Offshore Structures | VL | DE/EN | 2 | 1 |
| | | | | | | | | | Strukturanalyse von Schiffen und meerestechnischen Konstruktionen | Structural Analysis of Ships and Offshore Structures | UE | DE/EN | 2 | 1 |
| 1-2 | Maritime Technik und meerestechnische Systeme | Maritime Technology and Maritime Systems | M-8 | C | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Einführung in die Maritime Technik | Introduction to Maritime Technology | VL | DE | 2 | 1 |
| | | | | | | | | | Einführung in die Maritime Technik | Introduction to Maritime Technology | UE | DE | 1 | 1 |
| | | | | | | | | | Analyse meerestechnischer Systeme | Analysis of Maritime Systems | VL | DE | 2 | 2 |
| | | | | | | | | | Analyse meerestechnischer Systeme | Analysis of Maritime Systems | UE | DE | 1 | 2 |
| 1-2 | Seeverhalten von Schiffen und Schiffbaulabor | Seakeeping of Ships and Laboratory on Naval Architecture | M-8 | C | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Seeverhalten von Schiffen | Seakeeping of Ships | VL | DE/EN | 2 | 1 |
| | | | | | | | | | Seeverhalten von Schiffen | Seakeeping of Ships | UE | DE/EN | 2 | 1 |
| | | | | | | | | | Schiffbaulabor | Laboratory on Naval Architecture | FL | DE/EN | 2 | 2 |
| 1-2 | Numerische Methoden im Schiffsentwurf | Numerical Methods in Ship Design | M-6 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Numerische Methoden im Schiffsentwurf | Numerical Methods in Ship Design | POL | DE | 2 | 1 |
| | | | | | | | | | Numerische Methoden im Schiffsentwurf | Numerical Methods in Ship Design | VL | DE | 2 | 2 |

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|--------------|--|--|-----------|----------|-----------|-------|---------------------|--------|--|--|-------------------|--------------|---------|---------|
| 2 | Hafenlogistik | Port Logistics | W-12 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Hafenlogistik | Port Logistics | VL | DE | 2 | 2 |
| | | | | | | | | | Hafenlogistik | Port Logistics | UE | DE | 2 | 2 |
| 2 | High-Order FEM | High-Order FEM | M-10 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | High-Order FEM | High-Order FEM | VL | EN | 3 | 2 |
| | | | | | | | | | High-Order FEM | High-Order FEM | HÜ | EN | 1 | 2 |
| 2 | Hochleistungsrechnen | High-Performance Computing | M-8 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Grundlagen des Hochleistungsrechnens | Fundamentals of High-Performance Computing | VL | DE/EN | 2 | 2 |
| | | | | | | | | | Grundlagen des Hochleistungsrechnens | Fundamentals of High-Performance Computing | POL | DE/EN | 2 | 2 |
| 2 | Numerische Algorithmen in der Strukturmechanik | Numerical Algorithms in Structural Mechanics | M-10 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Numerische Algorithmen in der Strukturmechanik | Numerical Algorithms in Structural Mechanics | VL | DE | 2 | 2 |
| | | | | | | | | | Numerische Algorithmen in der Strukturmechanik | Numerical Algorithms in Structural Mechanics | UE | DE | 2 | 2 |
| 2 | Numerische Methoden der Thermofluidodynamik II | Computational Fluid Dynamics II | M-8 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Numerische Methoden der Thermofluidodynamik II | Computational Fluid Dynamics II | VL | DE/EN | 2 | 2 |
| | | | | | | | | | Numerische Methoden der Thermofluidodynamik II | Computational Fluid Dynamics II | HÜ | DE/EN | 2 | 2 |
| 2 | Numerische Strukturdynamik | Computational Structural Dynamics | M-10 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Numerische Strukturdynamik | Computational Structural Dynamics | VL | DE | 3 | 2 |
| | | | | | | | | | Numerische Strukturdynamik | Computational Structural Dynamics | UE | DE | 1 | 2 |
| 2 | Schiffsmotorenanlagen | Marine Diesel Engine Plants | M-12 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Schiffsmotorenanlagen | Marine Diesel Engine Plants | VL | DE | 3 | 2 |
| | | | | | | | | | Schiffsmotorenanlagen | Marine Diesel Engine Plants | HÜ | DE | 1 | 2 |
| 2 | Schiffspropeller und Kavitation | Ship propellers and cavitation | M-6 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Kavitation | Cavitation | VL | DE | 2 | 2 |
| | | | | | | | | | Schiffspropeller | Marine Propellers | VL | DE | 2 | 2 |
| | | | | | | | | | Schiffspropeller | Marine Propellers | POL | DE | 2 | 2 |
| 2 | Spezielle Gebiete der Schiffskonstruktion | Special topics of ship structural design | M-10 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Spezielle Gebiete der Schiffskonstruktion | Special topics of ship structural design | VL | DE/EN | 2 | 2 |
| | | | | | | | | | Spezielle Gebiete der Schiffskonstruktion | Special topics of ship structural design | POL | DE/EN | 2 | 2 |

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| 2 | Spezielle Gebiete der Schiffspropulsion und Hydrodynamik schneller Wasserfahrzeuge | Special Topics of Ship Propulsion and Hydrodynamics of High Speed Water Vehicles | M-8 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Hydrodynamik schneller Wasserfahrzeuge | Hydrodynamics of High Speed Water Vehicles | VL | DE/EN | 3 | 2 |
| | | | | | | | | | Spezielle Gebiete der Schiffspropulsion | Special Topics of Ship Propulsion | VL | DE/EN | 3 | 2 |
| 2-3 | Ausgewählte Themen der Schiffs- und Meerestechnik | Selected topics in Naval Architecture and Ocean Engineering | M-10 | EC | OM | | | 6 | | | | | | |
| | | | | | | Yes | MdIP | 3 | Ausrüstung und Betrieb von Offshore-Speziialschiffen | Outfitting and Operation of Special Purpose Offshore Ships | VL | DE | 2 | 2 |
| | | | | | | Yes | MdIP | 3 | Entwerfen von Unterwasserfahrzeugen | Design of Underwater Vessels | VL | DE | 2 | 2 |
| | | | | | | Yes | MdIP | 3 | Schiffsakustik | Ship Acoustics | VL | DE | 2 | 2 |
| | | | | | | Yes | MdIP | 3 | Offshore-Windkraftparks | Offshore Wind Parks | VL | DE | 2 | 3 |
| | | | | | | Yes | MdIP | 3 | Spezielle Gebiete der Experimentellen und Theoretischen Fluiddynamik | Selected Topics of Experimental and Theoretical Fluid Dynamics | VL | DE | 2 | 3 |
| | | | | | | Yes | MdIP | 3 | Technik und Strömungsmechanik von Segelschiffen | Technical Elements and Fluid Mechanics of Sailing Ships | VL | DE/EN | 2 | 3 |
| | | | | | | Yes | MdIP | 3 | Technik von Überwasser-marinefahrzeugen | Technology of Naval Surface Vessels | VL | DE | 2 | 3 |
| 3 | Projektarbeit Schiffs- und Meerestechnik | Research Project Naval Architecture and Ocean Engineering | not defined | C | CM | Yes | PA lt. FSPO | 12 | | | | | | |
| 3 | Betriebsfestigkeit von Schiffen und meeres-technischen Konstruktionen | Fatigue Strength of Ships and Offshore Structures | M-10 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Betriebsfestigkeit von Schiffen und meeres-technischen Konstruktionen | Fatigue Strength of Ships and Offshore Structures | VL | EN | 2 | 3 |
| | | | | | | | | | Betriebsfestigkeit von Schiffen und meeres-technischen Konstruktionen | Fatigue Strength of Ships and Offshore Structures | UE | EN | 2 | 3 |
| 3 | Eistechnik | Arctic Technology | M-10 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Eistechnik | Ice Engineering | VL | DE/EN | 2 | 3 |
| | | | | | | | | | Eistechnik | Ice Engineering | UE | DE/EN | 1 | 3 |
| | | | | | | | | | Schiffskonstruktionen für die Polarregionen | Ship structural design for arctic conditions | POL | DE/EN | 2 | 3 |
| 3 | Innovative Methoden der Numerischen Thermofluiddynamik | Innovative CFD Approaches | M-8 | EC | CM | Yes | PA | 6 | | | | | | |
| | | | | | | | | | Anwendung innovativer Methoden der Numerischen Thermofluiddynamik in Forschung und Praxis | Application of Innovative CFD Methods in Research and Development | VL | DE/EN | 2 | 3 |
| | | | | | | | | | Anwendung innovativer Methoden der Numerischen Thermofluiddynamik in Forschung und Praxis | Application of Innovative CFD Methods in Research and Development | UE | DE/EN | 2 | 3 |

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|--|--|--|-------------|----------|-----------|-------|---------------------|--------|---|-------------------------------------|-------------------|--------------|---------|---------|
| 3 | Lineare und Nichtlineare Wellen | Linear and Nonlinear Waves | M-14 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Lineare und Nichtlineare Wellen | Linear and Nonlinear Waves | POL | DE/EN | 4 | 3 |
| 3 | Manövrierfähigkeit und Schiffshydrodynamik beschränkter Gewässer | Manoeuvrability and Shallow Water Ship Hydrodynamics | M-8 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Manövrierfähigkeit von Schiffen | Manoeuvrability of Ships | VL | DE/EN | 2 | 3 |
| | | | | | | | | | Schiffshydrodynamik beschränkter Gewässer | Shallow Water Ship Hydrodynamics | VL | DE/EN | 2 | 3 |
| 3 | Nichtlineare Strukturanalyse | Nonlinear Structural Analysis | M-10 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Nichtlineare Strukturanalyse | Nonlinear Structural Analysis | VL | DE/EN | 3 | 3 |
| | | | | | | | | | Nichtlineare Strukturanalyse | Nonlinear Structural Analysis | UE | DE/EN | 1 | 3 |
| 3 | Spezielle Kapitel des Schiffsentwurfs | Advanced Ship Design | M-6 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Spezielle Kapitel des Schiffsentwurfs | Advanced Ship Design | VL | DE | 2 | 3 |
| | | | | | | | | | Spezielle Kapitel des Schiffsentwurfs | Advanced Ship Design | HÜ | DE | 2 | 3 |
| 3 | Technische Schwingungslehre | Vibration Theory | M-14 | EC | CM | Yes | KI | 6 | | | | | | |
| | | | | | | | | | Technische Schwingungslehre | Vibration Theory | VL | DE/EN | 4 | 3 |
| 3-4 | Schiffshilfsanlagen | Marine Auxiliaries | M-12 | EC | CM | Yes | MdIP | 6 | | | | | | |
| | | | | | | | | | Elektrische Anlagen auf Schiffen | Electrical Installation on Ships | VL | DE | 2 | 3 |
| | | | | | | | | | Elektrische Anlagen auf Schiffen | Electrical Installation on Ships | HÜ | DE | 1 | 3 |
| | | | | | | | | | Hilfsanlagen auf Schiffen | Auxiliary Systems on Board of Ships | VL | DE | 2 | 4 |
| | | | | | | | | | Hilfsanlagen auf Schiffen | Auxiliary Systems on Board of Ships | HÜ | DE | 1 | 4 |
| 1-3 | Betrieb & Management | Business & Management | W-1 | C | OM | | | 6 | Selection out of Catalogue | | | | | |
| 1-3 | Nichttechnische Ergänzungskurse im Master | Nontechnical Elective Complementary Courses for Master | 0-TUHH | C | OM | | | 6 | Selection out of Catalogue | | | | | |
| Thesis Compulsory Courses: 30 LP Optional Courses: 0 LP | | | | | | | | | | | | | | |
| 4 | Masterarbeit | Master Thesis | not defined | C | CM | Yes | lt. FSPO | 30 | | | | | | |

Explanation:

¹C=Compulsory, EC=Elective Compulsory

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

³KI=Written exam, PA=Project, MdIP=Oral exam, SA=Written elaboration, Re=Presentation, KI=Written exam, MdIP=Oral exam, HA=Homework, PA=Project, PA lt. FSPO=Project (accord. to Subject Specific Regulations), lt.

FSPO=according to Subject Specific Regulations

⁴CP=Credit Points

⁵VL=Lecture, SE=Seminar, UE=Recitation Section (small), POL=Problem-based Learning, FL=Laboratory, HÜ=Recitation Section (large)

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

⁷SWS=Contact hours