Fachspezifische Anforderungen für das Master-Studium im Studiengang Naval Architecture and Ocean Engineering

Subject-specific requirements for the Master's degree program in Naval Architecture and Ocean Engineering

Field	Requirement	Required CP
Mathematics	Analysis	
	Linear Algebra	
	Ordinary and partial differential equations	
	Complex functions	
	Total	**20**

Field	Requirement	Required CP
Mechanics	Stereostatics	
	Elastostatics	
	Hydromechanics, kinematics and kinetics of the rigid body	
	Analytical mechanics, vibrations, multi-body dynamics	
	Total	**18**

Field	Requirement	Required CP
Engineering fundamentals	Electrical engineering	
	Engineering desing, production engineering	
	Computer science	
	Material science	
	Total	**24**

Field	Requirement	Required CP
Shipbuilding fundamentals	Hydrostatics and lines drawing	
	Fluid mechanics (frictionless, laminar & turbulent flows; math/physics modeling)	
	Numerical thermofluid dynamics (theory & numerics of partial (integro-)differential equations, CFD)	
	Design of ships (specification; line design; space and mass distribution; stability)	
	Resistance and propulsion (smooth water and additional resistance; testing; sea trials)	
	Ship design (drawings; ship elements; local dimensioning; longitudinal strength)	
	Fundamentals of structural analysis of ships (beam statics (FE); shear absorption; torsion)	
	Ship dynamics (maneuvering, movement in waves, regular and irregular swell)	
	Fundamentals of marine engineering	
	Total	**30**