

## Nordic Master in Maritime Engineering, courses at all universities

	Aalto	Chalmers	DTU	NTNU
1st year	MEC-E1004 Principles of Naval Arch., 5	EEN130 Systems and Mechat. for Mob. Eng. 7.5	41216 Structural Assessment of Ship, 5	TMR4115 Design methods, 7.5
Autumn	MEC-E2000 Marine and Ship Syst. Eng., 5 MEC-E1030 Random Loads and Proc., 5 MEC-E2003 Passenger Ships, 5  <b>Electives (10-15ECTS):</b> MEC-E1020 Fluid Dynamics, 5  MEC-E1040 Dynamics of Structures, 5 MEC-E1050 FEM in Solids, 5  MEC-E4003 Ice Mechanics, 5  MEC-E4004 Model-scale testing etc, 5 MEC-E8005 Thin-walled structures 5 MEC-E8006 Fatigue of structures, 5	MMS195 Intr. to Propulsion and Energy..., 7.5 MMA169 Structural Engineering, 7.5 MMS185 Stab. and Des. Basis for Mar. Struct, 7.5	41222 Wave Loads on Ships and Offshore Struct., 5 41275 Ship Operations, 5  38106 Developing an Entr. Mindset etc, 5 42500 Innovation in Engineering, 5  <b>Electives (5 ECTS):</b> 41129 Turbulent flows, 5  41117 Marine and Coastal Structures, 5 41515 Computational multibody dynamics, 5	TMR4260 Safe operation and maintenance, 7.5  <b>Electives (15 ECTS):</b> TMR4130 Risk analysis and safety..., 7.5 TMR4215 Sea loads, 7.5  TMR4182 Marine dynamics, 7.5  TMR4290 FEM in structural analysis, 7.5 TMR4275 Mod., Simul. & Ana. of Dyn. Syst., 7.5 TEP4223 Life cycle assessment
1st year	MEC-E2007 Ship Structures and Const., 5	MMA163 Ship Resistance and Propulsion, 7.5	41107 Marine and Ocean Engineering, 5	TMR4164 Shipbu. and Custom. Manufact., 7.5
Spring	MEC-E2011 Ship Design Portfolio, 5 MEC-E2014 Ship Hydrostatics, 5 MEC-E2014 Ship Hydrodynamics, 5  <i>Language studies</i>  <b>Electives (up to 5 ECTS):</b> MEC-E8001 Finite Element Analysis, 5 MEC-E4002 Ice Loads on Structures, 5 MEC-E4006 Ship Operations in Ice, 5	MMS205 Naval Architecture, 7.5 SJO746 Wave Loads and Seakeeping, 7.5  <b>Electives (7.5 ECTS):</b> KKR073 Comp. Fluid. Dyn. For Engineers, 7.5 MHA043 Material Mechanics, 7.5 MMS210 Connect. Fleets in Data-Driven Eng, 7.5	41317 Computational Fluid Mechanics, 5 41514 Dynamics of Machinery, 5 41315 Applied CFD, 5  <b>Electives (10 ECTS):</b> 02411 Statistical Design and Ana. of Experim., 5 41237 Dynamics of Structures, 5 41517 Stiffened Plates and Sandwich Comp., 5 41226 Advanced Wave Hydrodynamics, 5 41346 Internal combustion eng. Etc, 5 41418 Green fuels and power-to-x, 5	TMR4220 Naval hydrodynamics, 7.5  <b>Electives (15 ECTS):</b> TMR4135 Advanced vessel design, 7.5 TMR4290 Marine Elec. and Prop. Systems, 7.5 TMR4225 Marine operations, 7.5
2nd year	MEC-E2003 Passenger Ships, 5	MMA151 Marine design Project, 15	41216 Structural Assessment of Ships, 5	TMR4500 Ocean structures – spec. project, 7.5
Autumn	MEC-E2009 Marine Risks and Safety, 5  <i>Language studies</i>  <b>Electives (up to 20ECTS):</b> MEC-E1040 Dynamics of Structures, 5 MEC-E2016 Marine Data Analysis, 5 MEC-E4003 Ice Mechanics, 5  MEC-E4004 Model-scale Testing in Ice, 5 MEC-E8005 Thin-walled Structures, 5 MEC-E8006 Fatigue of Structures, 5	<b>Electives (15 ECTS):</b> TME260 Fatigue and Fracture, 7.5 MMS046 Project Management, 7.5 SJO851 Towards Sustainable Shipping, 7.5 MMS190 Methods of Risk and Rel. Analysis, 7.5 SJO825 Organization and Strategy, 7.5 TME141 Structural Dynamics, 7.5	41222 Wave Loads on Ships and Offs. Struct., 5 41275 Ship Operations, 5  41117 Marine and Coastal Structures, 5  <b>Electives (10 ECTS):</b> 41525 Finite Element Methods 10 41129 Turbulent Flows, 5  41822 Experimental Fluid Mechanics, 5 41822 Experimental Solid Mechanics, 5	TMR4505 Specialization courses, 7.5 TMR4195 Design of offshore structures, 7.5  <b>Electives (7.5 ECTS):</b> TMR4305 Adv. analysis of marine struct., 7.5 TMR4130 Risk analysis and safety..., 7.5 TMR4200 Fatigue and fract. of mar. struct., 7.5 TMR4235 Stochastic theory of sea loads, 7.5 TMR4215 Sea loads, 7.5
2nd year	Thesis, 30 ECTS			
Spring				