

MSC OFFSHORE & DREDGING ENGINEERING 2014-2015
Faculty of Mechanical, Maritime and Materials Engineering

Student name:

Student number:

HBO BACHELORS (only for HBO-Bachelors)

"SCHAKELKLAS" (HBO civil engineering Bachelors):

Course code	Course name	ECTS
WI1708TH1	Analysis 1	3
WI1708TH2	Analysis 2	3
WI1708TH3	Analysis 3	3
WI1807TH	Linear Algebra 1	3
WI1909TH	Differential Equations	3
WB1225	Fluid Dynamics	3
WI3097TU	Numerical Methods for Differential Equations	4
WI1102CT	Probability and Statistics	3
CTB1210	Dynamica & Modelvorming	5
Total		≥ 29

"SCHAKELKLAS" (other HBO engineering Bachelors):

Course code	Course name	ECTS
WI1708TH1	Analysis 1	3
WI1708TH2	Analysis 2	3
WI1708TH3	Analysis 3	3
WI1807TH	Linear Algebra 1	3
WI1909TH	Differential Equations	3
WB1225	Fluid Dynamics	3
WB1216-13	Dynamics 2	3
WB1217	Strength of Materials 2	3
WB2207-07	Systems and Control Engineering	3
MT837	Construction and Strength 2	3
Total		≥ 30

CORE CURRICULUM (for every student)

CORE CURRICULUM (first year)

Course code	Course name	ECTS
OE4605	Introduction ODE	0
OE4606	Introduction to Offshore Engineering	3
OE4607	Introduction to Dredging Engineering	3
OE4630	Offshore Hydromechanics	8
CIE4130	Probabilistic Design	4
<input type="checkbox"/> CIE4325	Ocean Waves	6
<input type="checkbox"/> CIE4325OE	Ocean Waves for Offshore	3
<input type="checkbox"/> OE4610-13	Survey of Offshore Engineering Projects (or OE4611-13)	6
<input type="checkbox"/> OE4611-13	Research Exercise (or OE4610-13)	6
<input type="checkbox"/> AES1730	Introduction to Geotechnical Engineering (ME/MT students)	3
<input type="checkbox"/> SC4026	Control System Design (or WB2105mt, CE students)	3
<input type="checkbox"/> WB2105mt	Control Engineering for MT (or SC4026, CE students)	3
Total		≥ 30

CORE CURRICULUM (second year)

Course code	Course name	ECTS
<input type="checkbox"/> OE5680-15	Industrial Practice	15
OE5685-15	Problem Analysis Thesis (together with OE5690, total 45 ECTS)	15
OE5690-30	Thesis Work (together with OE5685, total 45 ECTS)	30
Total		60

Place and date:

Signature Professor:

Signature student:

Examination board:

MSC OFFSHORE & DREDGING ENGINEERING 2014-2015
Faculty of Mechanical, Maritime and Materials Engineering

Student name:

Student number:

DREDGING ENGINEERING, TRENCHING & DEEPSEA MINING

(to be signed by Prof. dr.ir. C. van Rhee)

CORE

Course code	Course name	ECTS
OE4625	Dredging Pumps and Slurry Transport	4
OE4626	Dredging Processes I	4
OE4627	Dredging Processes II	3
OE4628	CFD for Dredging & Offshore Engineering	3
OE1402	Attending Student Colloquia	1
	Total	15

RECOMMENDED ELECTIVES

Course code	Course name	ECTS
<input type="checkbox"/> CIE5202	Stratified Flows	3
<input type="checkbox"/> CIE5312	Turbulence in Hydraulics	3
<input type="checkbox"/> OE4652	Floating Structures	4
<input type="checkbox"/> OE4623	Drive System Design Principles	3
<input type="checkbox"/> OE4652	Floating Structures	4
	Total	

ELECTIVES

ARCTIC ENGINEERING

Course code	Course name	ECTS
OE4680-12	Arctic Engineering	4
AT327-12	Arctic Offshore Engineering (Spitsbergen)	6
	Total	10

SUB SEA

Course code	Course name	ECTS
OE4654	Sub Sea Engineering	4
OE4653	Marine Pipelines	4
	Total	8

Place and date:

Signature Professor:

Signature student:

Examination board:

MSC OFFSHORE & DREDGING ENGINEERING 2014-2015
Faculty of Mechanical, Maritime and Materials Engineering

Student name:

Student number:

BOTTOM FOUNDED STRUCTURES, ARCTIC & WIND

(to be signed by Prof. dr. A. Metrikine)

CORE

Course code	Course name	ECTS
OE4651	Bottom Founded Structures	6
CIE4140	Structural Dynamics	4
OE4652	Floating Structures	4
Total		14

RECOMMENDED ELECTIVES

ARCTIC ENGINEERING

Course code	Course name	ECTS
OE4680	Arctic Engineering	4
AT327	Arctic Offshore Engineering (Spitsbergen)	6
OE4629	Identification of Loads on Offshore Structures	4
Total		14

OFFSHORE WIND ENERGY

Course code	Course name	ECTS
AE3W02	Introduction to Wind Energy	4
OE5662	Offshore Wind Farm Design	4
OE5665	Offshore Wind Support Structures	4
Total		12

SUB SEA

Course code	Course name	ECTS
OE4654	Sub Sea Engineering	4
OE4653	Marine Pipelines	4
OE4629	Identification of Loads on Offshore Structures	4
Total		12

INTEGRATED DESIGN & MANAGEMENT

Course code	Course name	ECTS
CIE3380	Infrastructure Management	4
CME2300	Financial Engineering	4
TW2020	Optimization	6
Total		14

ELECTIVES

Course code	Course name	ECTS
<input type="checkbox"/> OE4680-12	Arctic Engineering	4
<input type="checkbox"/> OE4629	Identification of Loads on Offshore Structures	4
<input type="checkbox"/> OE4624	Offshore Soil Mechanics	3
<input type="checkbox"/> OE4653	Marine Pipelines	4
<input type="checkbox"/> OE4654	Sub Sea Engineering	4
<input type="checkbox"/> CIE5145	Random Vibrations	3
<input type="checkbox"/> WB1412	Linear and Nonlinear Vibrations in Mechanical Systems	3
<input type="checkbox"/> CIE5317	Physical Oceanography	3
<input type="checkbox"/> OE4628	CFD for Dredging & Offshore Engineering	3
<input type="checkbox"/> OE4631	Fatigue and Fracture in Marine Structures	3
Total		

Place and date:

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Signature student:

Examination board:

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FLOATING OFFSHORE STRUCTURES

(to be signed by Prof.dr.ir. R.H.M. Huijsmans)

CORE

Course code	Course name	ECTS
OE4652	Floating Structures	4
OE5664	Offshore Moorings	3
OE5663	Dynamic Positioning	3
CIE4140	Structural Dynamics	4
OE1402	Attending Student Colloquia	1
Total		15

RECOMMENDED ELECTIVES

Course code	Course name	ECTS
<input type="checkbox"/> WI4011	Computational Fluid Dynamics	6
<input type="checkbox"/> OE4628	CFD for Dredging & Offshore Engineering	3
<input type="checkbox"/> OE4623	Drive System Design Principles	3
Total		

ELECTIVES

ARCTIC ENGINEERING

Course code	Course name	ECTS
OE4680-12	Arctic Engineering	4
AT327-12	Arctic Offshore Engineering (Spitsbergen)	6
Total		10

SUB SEA

Course code	Course name	ECTS
OE4654	Sub Sea Engineering	4
OE4653	Marine Pipelines	4
Total		8

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STRUCTURAL DESIGN AND ANALYSIS

(to be signed by Prof.dr.ir. M.L. Kaminski)

CORE

Course code	Course name	ECTS
OE4652	Floating Structures	4
CIE4140	Structural Dynamics	4
OE4631	Fatigue and Fracture in Marine Structures	3
MT523-S	Numerical Methods – Structural	2.5
MT830	Applications of the Finite Element Method	3
Total		16.5

RECOMMENDED ELECTIVES

EXPERT IN STRUCTURAL ANALYSIS (PhD preparation)

Course code	Course name	ECTS
WB1412	Linear and Nonlinear Vibrations in Mechanical Systems	3
MT835	Hydro-Structural and Hydro-elastic problems	3
CIE5145	Random Vibrations	3
MT816	Composite Structures	2
Total		11

ARCTIC ENGINEERING

Course code	Course name	ECTS
OE4680	Arctic Engineering	4
AT-327	Arctic Offshore Engineering (UNIS)	6
OE4629	Identification of Loads on Marine Structures	4
Total		14

OFFSHORE WIND ENERGY

Course code	Course name	ECTS
AE3-WO2	Introduction to Wind Energy	4
OE5662	Offshore Wind Farm Design	4
OE5665	Offshore Wind Support Structures	4
Total		12

SUBSEA

Course code	Course name	ECTS
OE4654	Subsea Engineering	4
OE4653	Marine Pipelines	4
OE4629	Identification of Loads on Marine Structures	4
Total		12

ASSET MANAGEMENT

Course code	Course name	ECTS
CIE3380	Infrastructure Management	4
CME2300	Financial Engineering	4
OE4635	Durability of Offshore Materials	3
Total		11

INDIVIDUAL PACKAGE

Course code	Course name	ECTS
Total		

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MSC OFFSHORE & DREDGING ENGINEERING 2014-2015
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MATERIALS FOR OFFSHORE STRUCTURES

(to be signed by Prof. dr. I.M. Richardson)

CORE

Course code	Course name	ECTS
OE4632	Offshore Materials	3
OE4633	Welding of Offshore Materials	3
OE4634	Fracture Mechanics in Offshore Materials	3
OE4635	Durability of Offshore Materials	3
OE4631	Fatigue and Fracture in Marine Structures	3
	Total	15

RECOMMENDED ELECTIVES

Course code	Course name	ECTS
<input type="checkbox"/> CIE5128	Fibre-Reinforced Polymer Structures (FRP)	3
<input type="checkbox"/> CIE5122	Capita Selecta Steel and Aluminium Structures	4
<input type="checkbox"/> CIE5142	Computational Methods in Non-Linear Solid Mechanics	3
	Total	

ELECTIVES

ARCTIC ENGINEERING

Course code	Course name	ECTS
OE4680-12	Arctic Engineering	4
AT327-12	Arctic Offshore Engineering (Spitsbergen)	6
	Total	10

SUB SEA

Course code	Course name	ECTS
OE4654	Sub Sea Engineering	4
OE4653	Marine Pipelines	4
	Total	8

Place and date:

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