




MSc Offshore and Dredging Engineering - Curriculum 2017-2018

MSc ODE First Year - Core Curriculum, Specialisation Core

Q1	Q2	Q3	Q4
OE44005 Introduction to Offshore Engineering	MT44020 Motions & Loading of Structures in Waves		
OE44010 Introduction to Dredging Engineering	CIE4130 Probabilistic Design	OE44030 Offshore Geotechnical Engineering	
MT44045 Introduction to Ship and Offshore Hydromechanics		OE44035 Dredging Pumps and Slurry Transport	OE44050 CFD for Dredging & Offshore Engineering
CIE4325 Ocean Waves	OE44040 Dredging Processes I	OE44045 Dredging Processes II	OE44125 Dynamic Positioning
	OE44095 Bottom Founded Offshore Structures	CIE4140 Structural Dynamics	OE44100 Floating Structures & Offshore Moorings
	MT44085 Buckling & Ultimate Strength in Marine Structures		OE44085 Fatigue & Fracture in Marine Structures
	OE44110 Subsea Engineering	OE44115 Arctic Engineering	OE44105 Marine Pipelines

MSc ODE Second Year - Specialisation Core and Graduation Thesis

Q5	Q6	Q7	Q8
OE44015 (or OE44145) Survey of Offshore Engineering Projects 	OE54015 Problem Analysis Thesis 	OE54030 Thesis *	
OE44145 (or OE44015) Research Exercise 			*
MT44030 Structural Design and Analysis **			
AT327-12 Arctic Offshore Engineering (Spitsbergen)			

Legend

Core Curriculum

Specialisations

Dredging Engineering, Trenching & Deepsea Mining

Floating Offshore Structures


Bottom Founded Offshore Structures, Arctic & Wind

Structural Analysis & Design

General Electives

Arctic Engineering

Sub Sea

 In consultation with the Chair Professor only.

* May be scheduled at any time

** May also be done in Q1

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MSc ODE First Year - Electives

Q1	Q2	Q3	Q4
	OE44075 Introduction to Ocean Energy Technologies	OE44120 Offshore Wind Farms Design	OE44135 Offshore Wind Support Structures
	AE3W02TU Introduction to Wind Turbines: Physics and Technology	CIE5312 Turbulence in Hydraulics	CIE5302 Stratified Flows
AE4202 CFD for AeroSpace Engineers	AE4136 CFD 2: Discretization Techniques	MT44025 Advanced Course in Ship Hydromechanics	OE44055 Load Identification and Monitoring of Structures
	MT44010 Non-metallic Materials in Marine Structures		CIE4260 Measurement and Analysis of Vibrations
CIE5317 Physical Oceanography **			CIE5340 Soil Dynamics
EE4C04 Control System Design **			CIE5310 Probabilistic Design in Hydraulic Engineering
WI4051TU Introduction to Operation Research		CIE3380 Infrastructure Management	CIE4480 Integral Systems Design

MSc ODE Second Year - Electives

Q5	Q6	Q7	Q8
OE44025 Drive System Design Principles *			
OE44090 Introduction to Computational Dynamics of Offshore Structures			
MT44090 Fluid-structure interaction in Marine Structures			
CIE5145 Random Vibrations			
CIE5260 Structural Response to Earthquakes			
OE44140 Multidisciplinary Project * ⚙️			
OE54000 Industrial Practice * ⚙️			

Recommended Electives

Offshore Renewable Energy
Dredging Engineering, Trenching & Deepsea Mining
Floating Offshore Structures
Bottom Founded Offshore Structures, Arctic & Wind
Structural Analysis & Design

Annotations & Additional Electives

Structural Dynamics
Additional Electives
Integrated Design & Management

⚙️ In consultation with the Chair Professor only.

* May be scheduled at any time

** May also be done in Q5