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| Student name |  |
| Student number |  |
| Student e-mail |  |

**MSc ODE 1st YEAR**

**COURSES** **ODE Core** (Obligatory 31 ECTS)

|  |  |  |  |
| --- | --- | --- | --- |
| Course code | Course name | Period | EC |
| CIE4325 | Ocean Waves | 1 | 6 |
| MT44020 | Motions & Loading of Structures in Waves | 2 | 5 |
| MT44045 | Introduction to Ship and Offshore Hydromechanics | 2 | 3 |
| MT44085 | Ultimate Strength in Marine Structures | 1 | 5 |
| OE44005  OE44010 | Introduction to Offshore Engineering | 1 | 3 |
| OE44010 | Introduction to Dredging Engineering | 1 | 3 |
| OE44076 | Offshore Renewable Energy | 3 | 6 |
|  | **Total** | | **31** |

**COURSES** **ODE Ethics and Engineering:** Choose 1 out of 2 (3 ECTS)

|  |  |  |  |
| --- | --- | --- | --- |
| Course code | Course name | Period | EC |
| WM0320TU  448 | Ethics and Engineering (period 1 or 3) | 1 or 3 | 3 |
| WM0349WB | Philosophy of Engineering Science and Design | 4 | 3 |
|  | **Total** | |  |

**COURSES ODE** **SPECIALISATIONS**: Choose your specialisation (14-18 ECTS)

|  |  |  |  |
| --- | --- | --- | --- |
| Course code | Course name | Period | EC |
|  | **ODE Dredging Engineering (18 ECTS)** |  | |
| OE44030 | Offshore Geotechnical Engineering | 3 | 4 |
| OE44035 | Dredging Pumps & Slurry Transport | 3 | 4 |
| OE44040 | Dredging Processes I | 2 | 4 |
| OE44045 | Dredging Processes II | 3 | 3 |
| OE44050 | CFD for Dredging and Offshore Engineering | 4 | 3 |
|  | **ODE Offshore Renewable Energy (16 ECTS)** |  | |
| CIEQ5002A | Structural Dynamics | 2 | 4 |
| OE44097 | Offshore Support Structures | 3 | 6 |
| OE44100 | Floating Structures & Offshore Moorings | 4 | 6 |
|  | **ODE Structural Design & Analysis (14 ECTS)** |  | |
| CIEQ5002A | Structural Dynamics | 2 | 4 |
| MT44030 | Torsion and Shear in Marine Structures | 1 | 5 |
| OE44085 | Fatigue Strength of Marine Structures | 3 | 5 |
|  | **Total** | |  |

**ODE Electives 1st YEAR 8-12 ECTS (courses from other specializations can be chosen as elective)**

|  |  |  |  |
| --- | --- | --- | --- |
| Course code | Course name | Period | EC |
| AE4W31 | Floating Offshore Wind Energy | 4 | 3 |
| MT44000 | Mechatronics in MT (period 3 and 4) | 3-4\* | 5 |
| MT44010 | Non-Metallic Materials in Marine Structures  Non-metallic materials in Marine Structures | 4 | 5 |
| OE44090 | Introduction to Computational Dynamics of Offshore Structures | 4 | 4 |
| OE44105 | Marine Pipelines | 4 | 4 |
| OE44110 | Subsea Engineering | 4 | 4 |
|  | **Total** | |  |

## \*Theoretical content is offered in period 3, practicals in period 4 (consult [CourseBase](https://studiegids.tudelft.nl/a101_displayProgram.do?program_tree_id=28151) for more information).

**MSc ODE 2nd YEAR**

**ODE/EWEM Graduation Project (obligatory 45 ECTS)**

|  |  |  |  |
| --- | --- | --- | --- |
| Course code | Course name |  | EC |
| OE54010-22 | ODE Literature Research |  | 10 |
| OE54035 | ODE MSc Thesis |  | 35 |
|  | **Total** | | **45** |

**ME-ODE suggested elective courses 2nd year (or free elective courses, min. 15 ECTS)**

|  |  |  |  |
| --- | --- | --- | --- |
| Course code | Course name | Period | EC |
| CIEM4302 | Cold Regions Engineering | 1 | 5 |
| MT44090 | Fluid - Structure Interaction in Marine Structures | 1 | 5 |
| OE44145 | Research Exercise\* |  | 6 |
| RO47001 | Robot Dynamics & Control | 1 | 5 |
| RO47002 | Machine Learning for Robotics | 1 | 5 |
| SC42001 | Control System Design | 1 | 5 |
| SC42015 | Control Theory | 1 | 6 |
| SC42056 | Optimization for Systems and Control | 1 | 3 |
| SET3055 | Economics and Regulations of Sustainable Energy Systems | 1 | 4 |
| TPM404B | Technology Entrepreneurship and Internationalization | 1 | 5 |
| TUD4040 | Joint Interdisciplinary Project | 1 | 15 |
|  | Additional Electives |  |  |
|  |  | **Total** |  |

\*In consultation with the supervisor, this course can be followed in any period.

**COURSES**: Use this space for any additional (free) electives or free specialisation.

|  |  |  |  |
| --- | --- | --- | --- |
| Course code | Course name | Period | EC |
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|  | **Total** | |  |

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| --- | --- |
| **Total of MSc ODE Study Program** (min. 120 ECTS) |  |

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| --- | --- | --- |
| Signature Head of Studies  Date: | Signature Student  Date: | On behalf of the Examination Board  Date: |