

Addendum to the Programme Specification

3811 MSc Maritime Engineering

This Addendum has been produced to highlight the key changes made to the existing Programme Specification as a result of the University's response to the Covid-19 Pandemic. You should read it in conjunction with the relevant Programme Specification from the year you started your programme.

[Programme Specification for entry in 2020-21](#)
[Programme Specification for entry in 2019-20](#)

University level information

In view of COVID-19, the University has had to make changes to some elements of programme delivery for 2020-21. These changes have included the method of delivery, such as face-to-face and online, and the number of modules available.

The University aims to provide as much of a face-to-face component to your education as prevailing conditions at the time allow, combined with its new blended approach that will develop active independent and group online learning.

As the COVID-19 pandemic develops, the University's response to this and other issues may likewise need to evolve. The University will consult with student representatives as necessary and appropriate and will communicate changes to you as soon as practicable so that you have the information you need to understand how a change may impact you and what steps you need to take next. The University remains committed to supporting you as you learn.

Programme Structure

Where optional modules have been specified, the following is an indicative list of available optional modules, which are subject to change each academic year. Please note that, in some instances, modules have limited spaces available.

3813 - Maritime Engineering Science / Naval Architecture

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3813-1 - MSc MES Naval Arch P1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

FEEG 6200 Induction for Engineers	0	No	Semester 1
SESS 3023 Marine Hydrodynamics	15	No	Semester 2
SESS 6063 Advances in Ship Res & Prop	15	No	Semester 1
SESS 6065 Fundamentals of Ship Science	15	No	Semester 1
SESS 6071 Marine Structures in Fluids	15	No	Semester 2
SESS 6074 Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule OPTIONAL	Select 3 modules Select 1 semester 1 module and 2 semester 2 modules from the following:		
Rule LEVEL 6	Select 0 to 1 Level 6 modules		
FEEG 3001	Finite Element Analysis in Solid Mechanics	15	Semester 1
SESS 3022	Ship Manoeuvring and Control	15	Semester 2
SESS 3026	Marine Structures	15	Semester 2
SESS 3027	Yacht and High Performance Craft	15	Semester 1
Rule LEVEL 7	Select 2 to 3 Level 7 modules		
FEEG 6005	Applications of CFD	15	Semester 1
FEEG 6009	Design Search and Optimisation (DSO) - Principles, Methods,	15	Semester 2
SESG 6040	Failure of Materials and Components	15	Semester 2
SESS 6067	Renewable Energy from Environmental Flows:	15	Semester 2
SESS 6070	Offshore Engineering & Analysis	15	Semester 2

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3813-2 - MSc MES Naval Arch P2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

3814 - MSc Maritime Engineering Science (Advanced Materials)

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3814-1 - MSc MES Adv Mat P1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	Yes	Semester 1
SESG 6040	Failure of Mtrls and Comps	15	No	Semester 2
SESG 6042	Materials for Transport Appl	15	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6074	Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule PT1 R1	<p>Select 60 Credits</p> <p>You must take 60 credits from the following lists.</p> <p>Where possible, please ensure that you select an even split of credits overall by Semester including your compulsory modules. If you do not, you will be contacted by your Student Office and asked to amend your choices.</p>		
Rule PT1 R1 G1	<p>Group 1 - Level 6 Modules</p> <p>Select up to 30 credits from the following Level 6 modules:</p>		
FEEG 3001	Finite Element Analysis in Solid Mechanics	15	Semester 1
SESG 3024	Manufacturing and Materials	15	Semester 1
SESS 3022	Ship Manoeuvring and Control	15	Semester 2
SESS 3023	Marine Hydrodynamics	15	Semester 2
SESS 3026	Marine Structures	15	Semester 2
SESS 3027	Yacht and High Performance Craft	15	Semester 1
Rule PT1 R1 G2	<p>Group 2 - Level 7 Modules</p> <p>Select up to 60 credits from the following Level 7 modules:</p>		
SESG 6034	Surface Engineering	15	Semester 1
SESG 6039	Composites Engineering Design and Mechanics	15	Semester 1
SESG 6044	Microstructural and Surface Characterisation	15	Full Academic Year

SESS 6071	Marine Structures in Fluids	15	Semester 2
Rule PT1 R2	Optional English Lang Support You may select this module for English Language Support.		
FEEG 6035	TT English for MSc Engineers and Scientists	0	Semester 1

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3814-2 - MSc MES Adv Mat P2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

3815 - MSc Maritime Engineering Science (Maritime Computational Fluid Dynamics)

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3815-1 - MSc MES Maritime Comp FI Dy P1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
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FEEG 6005	Applications of CFD	15	No	Semester 1
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	No	Semester 1
SESS 3023	Marine Hydrodynamics	15	No	Semester 2
SESS 6063	Advances in Ship Res & Prop	15	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6074	Martm Safety: Risk, Env & Law	15	Yes	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule PT1 R1	Select 3 modules Minimum of two modules in Semester 2		
Rule PT1 R1 G1	Select 0 to 1 Level 6 modules		
FEEG 3001	Finite Element Analysis in Solid Mechanics	15	Semester 1
SESS 3022	Ship Manoeuvring and Control	15	Semester 2
SESS 3026	Marine Structures	15	Semester 2
Rule PT1 R1 G2	Select 2 to 3 Level 7 modules		
FEEG 6002	Advanced Computational Methods I	15	Semester 1
FEEG 6009	Design Search and Optimisation (DSO) - Principles, Methods,	15	Semester 2
SESA 6061	Turbulence	15	Semester 1
SESA 6067	Flow Control	15	Semester 1
SESS 6070	Offshore Engineering & Analysis	15	Semester 2

SESS 6071	Marine Structures in Fluids	15	Semester 2
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Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3815-2 - MSc MES Maritime Comp FI Dy P2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

3816 - MSc Maritime Engineering Science (Yacht & Small Craft)

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3816-1 - MSc MES Yacht & Small Craft P1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	Yes	Semester 1
SESS 3027	Yacht & High performance Craft	15	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6066	Sailing Yacht/Powercraft Des	15	No	Semester 2

[SESS 6074](#) Martm Safety: Risk, Env & Law 15 No Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule PT1 R1	<p>Select 60 Credits</p> <p>You must take 60 credits from the following lists.</p> <p>Where possible, please ensure that you select an even split of credits overall by Semester including your compulsory modules. If you do not, you will be contacted by your Student Office and asked to amend your choices.</p>		
Rule PT1 R1 G1	<p>Group 1 - Level 6 Modules</p> <p>Select up to 15 credits from these Level 6 modules:</p>		
FEEG 3001	Finite Element Analysis in Solid Mechanics	15	Semester 1
SESG 3024	Manufacturing and Materials	15	Semester 1
SESS 3022	Ship Manoeuvring and Control	15	Semester 2
SESS 3023	Marine Hydrodynamics	15	Semester 2
SESS 3026	Marine Structures	15	Semester 2
Rule PT1 R1 G2	<p>Group 2 - Level 7 Modules</p> <p>Select up to 60 credits from these Level 7 modules:</p>		
FEEG 6005	Applications of CFD	15	Semester 1
FEEG 6009	Design Search and Optimisation (DSO) - Principles, Methods,	15	Semester 2

SESG 6035	Advanced Sensors and Condition Monitoring	15	Semester 1
SESG 6039	Composites Engineering Design and Mechanics	15	Semester 1
SESG 6040	Failure of Materials and Components	15	Semester 2
SESS 6063	Advances in Ship Resistance and Propulsion	15	Semester 1
SESS 6067	Renewable Energy from Environmental Flows:	15	Semester 2
Rule PT1 R2	Optional English Lang Support You may select this module for English Language Support.		
FEEG 6035	TT English for MSc Engineers and Scientists	0	Semester 1

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3816-2 - MSc MES Yacht & Sml Craft P2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

3817 - MSc Maritime Engineering Science (Marine Engineering)

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)

Area title: 3817-1 - MSc MES Mar Eng P1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	No	Semester 1
SESG 6035	Advanced Sensors & Cond Mntrg	15	No	Semester 1
SESM 6034	Advanced Electrical Systems	15	No	Semester 1
SESS 3025	Marine Engineering	15	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6074	Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule PT1 R1	<p>Select 45 credits</p> <p>You must take 45 credits from the following:</p> <p>You may take a maximum of 15 credits at level NQF6.</p>		
FEEG 6007	Principles of Photovoltaics, Fuel Cells and Batteries	15	Semester 1
SESG 6040	Failure of Materials and Components	15	Semester 2
SESM 3030	Control and Instrumentation	15	Semester 1
SESM 6050	Tribology for Future Mobility	15	Semester 2
SESS 3022	Ship Manoeuvring and Control	15	Semester 2
SESS 6067	Renewable Energy from Environmental Flows:	15	Semester 2
SESS 6072	Maritime Robotics	15	Semester 1

Rule PT1 R2	Optional English Lang Support You may take this module for English Language Support.		
FEEG 6035	TT English for MSc Engineers and Scientists	0	Semester 1

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	3817-2 - MSc MES Mar Eng P2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

5453 - MSc Maritime Engineering Science (Offshore Engineering)

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	5453-1 - MSc MES Offshore Eng P1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 3001	Finite Elem Anlys Solid Mech	15	No	Semester 1
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

FEEG 6200	Induction for Engineers	0	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6067	Renewable Energy from Env Flow	15	No	Semester 2
SESS 6070	Offshore Engineering Analysis	15	No	Semester 2
SESS 6071	Marine Structures in Fluids	15	No	Semester 2
SESS 6072	Maritime Robotics	15	No	Semester 1
SESS 6074	Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule PT1 R1	Optional Modules You must take 1 module from the following:		
FEEG 6005	Applications of CFD	15	Semester 1
FEEG 6009	Design Search and Optimisation (DSO) - Principles, Methods,	15	Semester 2
SESS 3022	Ship Manoeuvring and Control	15	Semester 2
SESS 3023	Marine Hydrodynamics	15	Semester 2
SESS 3026	Marine Structures	15	Semester 2
SESS 6063	Advances in Ship Resistance and Propulsion	15	Semester 1
Rule PT1 R2	Optional English Lang Support You may select this module for English Language Support.		
FEEG 6035	TT English for MSc Engineers and Scientists	0	Semester 1

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	5453-2 - MSc MES Offshore Eng P2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

8502 - Maritime Engineering Science / Advanced Computational Engineering

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	MSc Mar Eng Sci/Adv Comp Yr 1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 3001	Finite Elem Anlys Solid Mech	15	No	Semester 1
FEEG 6005	Applications of CFD	15	No	Semester 1
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	No	Semester 1
SESS 3023	Marine Hydrodynamics	15	No	Semester 2
SESS 6063	Advances in Ship Res & Prop	15	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6074	Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule OPTIONAL	Select 2 modules		
FEEG 6009	Design Search and Optimisation (DSO) - Principles, Methods,	15	Semester 2
FEEG 6010	Advanced Finite Element Analysis	15	Semester 2
SESS 6067	Renewable Energy from Environmental Flows:	15	Semester 2
SESS 6070	Offshore Engineering & Analysis	15	Semester 2
SESS 6071	Marine Structures in Fluids	15	Semester 2

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	MSc Mar Eng Sci/Adv Comp Yr 2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

8503 - Maritime Engineering Science / Maritime Engineering and Autonomy

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)

Area title: MSc Mar Eng Sci/Autonomy Yr 1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	No	Semester 1
SESG 6035	Advanced Sensors & Cond Mntrg	15	No	Semester 1
SESM 6034	Advanced Electrical Systems	15	No	Semester 1
SESS 3025	Marine Engineering	15	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6072	Maritime Robotics	15	No	Semester 1
SESS 6074	Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule OPTIONAL	Select 2 modules		
SESG 6040	Failure of Materials and Components	15	Semester 2
SESS 6067	Renewable Energy from Environmental Flows:	15	Semester 2
SESS 6070	Offshore Engineering & Analysis	15	Semester 2
SESS 6071	Marine Structures in Fluids	15	Semester 2

Programme: MSc Maritime Eng Sci

Term: 2020-2021 Academic Session (202021)

Area title: MSc Mar Eng Sci/Autonomy Yr 2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	No	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

8504 - Maritime Engineering Science / Ocean Energy and Offshore Engineering

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	MSc Mar Eng Sci/Ocean Yr 1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 3001	Finite Elem Anlysis Solid Mech	15	No	Semester 1
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6067	Renewable Energy from Env Flow	15	No	Semester 2
SESS 6070	Offshore Engineering Analysis	15	No	Semester 2
SESS 6071	Marine Structures in Fluids	15	No	Semester 2
SESS 6072	Maritime Robotics	15	No	Semester 1
SESS 6074	Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
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Rule OPTIONAL	Select 1 module Select 1 module from the following:		
FEEG 6005	Applications of CFD	15	Semester 1
SESM 6032	Sustainable energy systems, resources and usage	15	Semester 1
SESS 3022	Ship Manoeuvring and Control	15	Semester 2
SESS 3023	Marine Hydrodynamics	15	Semester 2
SESS 3026	Marine Structures	15	Semester 2

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	MSc Mar Eng Sci/Ocean Yr 2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	No	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		

8509 - Maritime Engineering Science / Yacht and High Performance Craft

Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	MSc Mar Eng Sci/Yacht Yr 1

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard
FEEG 6200	Induction for Engineers	0	No	Semester 1
SESG 6039	Composites Eng Design & Mech	15	No	Semester 1
SESS 3027	Yacht & High performance Craft	15	No	Semester 1
SESS 6065	Fundamentals of Ship Science	15	No	Semester 1
SESS 6066	Sailing Yacht/Powercraft Des	15	No	Semester 2
SESS 6074	Martm Safety: Risk, Env & Law	15	No	Full Academic Year

Optional Modules

You must choose from the following modules:

Module		Credit	Semester/Term
Rule OPTIONAL	Select 3 modules Select 1 semester 1 module and 2 semester 2 modules from the following groups:		
Rule LEVEL 6	Select 0 to 1 Level 6 modules		
FEEG 3001	Finite Element Analysis in Solid Mechanics	15	Semester 1
SESS 3023	Marine Hydrodynamics	15	Semester 2
SESS 3026	Marine Structures	15	Semester 2
Rule LEVEL 7	Select 2 to 3 Level 7 modules		
FEEG 6005	Applications of CFD	15	Semester 1
FEEG 6009	Design Search and Optimisation (DSO) - Principles, Methods,	15	Semester 2
SESG 6040	Failure of Materials and Components	15	Semester 2

SESS 6063	Advances in Ship Resistance and Propulsion	15	Semester 1
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Programme:	MSc Maritime Eng Sci
Term:	2020-2021 Academic Session (202021)
Area title:	MSc Mar Eng Sci/Yacht Yr 2

Compulsory Modules

You must complete the following modules:

Module	Module Title	Credit	Core?	Semester/Term
FEEG 6012	MSc Research Project	60	Yes	Non-Standard

Optional Modules

You must choose from the following modules:

Module	Credit	Semester/Term
No optional modules in this Part		