Marine Technology with Marine Engineering

MEng Honours
UCAS code H501
4 Years

This professionally accredited four-year Marine Engineering MEng Honours degree includes a year of advanced study at Master’s level, leading to Chartered Engineer status.

The first three years of this degree follow the same programme as our Marine Engineering BEng Honours degree.

It focuses on the engineering systems that keep a ship running, from the main propulsion engines to the auxiliary machinery.

It includes a fourth year of Master’s-level study, in which you study advanced specialist modules such as:

- ship performance at sea
- marine power systems
- marine condition monitoring

You’ll work as part of an interdisciplinary team to complete an extensive group project in your fourth year.

This develops your technical expertise and equips you with professional-standard skills which lead directly to Chartered Engineer status.

Highlights of this degree

Professional accreditation

This degree is professionally accredited by the Engineering Council through the Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST).

This means future employers will recognise the quality of your degree because it meets high professional standards.

It also means both our BEng and MEng degrees provide a pathway to becoming a chartered engineer, chartered scientist, chartered marine scientist or an incorporated engineer.

*All professional accreditations are reviewed regularly by their professional body.

Fast track your career

Our professionally accredited degrees set you on the route to Chartered Engineer (CEng) status – one of the world’s best recognised professional qualifications.

Both our BEng and MEng degrees provide a pathway to becoming a Chartered Engineer.

Our Master of Engineering (MEng) degrees:

- are considered a more direct route to becoming chartered
- completely satisfy the academic requirements to achieve this professional qualification
- you don’t undertake any further study on the route to chartered status

Our three-year Bachelor of Engineering (BEng) degrees:

- can also lead to Chartered Engineer status later in your career
- you’ll need to undertake a further period of study, such as an accredited or approved Master’s degree, or appropriate further learning to Master’s level
- are suitable for international students who don’t need British Chartered Engineer status

Find out more about the benefits of becoming a Chartered Engineer on the Engineering Council’s website.

Transfer from a BEng to an MEng degree is possible up to the end of third year if you achieve the appropriate academic standard.

Transfer between marine technology degree specialisms is also possible up to the end of your second year.

Boost your employability with a work placement

Apply to spend a 9 to 12 months on an optional work placement between Stages 3 and 4. You can apply to spend your placement year with any organisation and will receive University support to do so.

You’ll gain first-hand experience of working in the sector, putting your learning into practice and developing your professional expertise.

It will extend your degree by a year and is subject to availability.

Find out more about Work Placements.

Learn in specialist facilities

You’ll learn state-of-the-art labs and fantastic facilities, many of which are unique to Newcastle University.

- Use our unique large-scale laboratories to help you learn and understand concepts taught in class
- Access our £1m Research Vessel, The Princess Royal
- Test models of propellers, submarines and more in our cavitation tunnel
- Conduct ship model experiments in our towing tank
- Experience modelling of the full offshore environment in our combined wind, wave and current tank

Other facilities include:

- hydrodynamics laboratory with wave-making and electronic recording equipment

Take a virtual tour at www.ncl.ac.uk/tour
• engineering laboratories, which include facilities to test diesel engines
• dedicated computer cluster running specialist marine design software
• specialist technical library and archive

**Defence Technical Undergraduate Scheme (DTUS)**

Do you want to become a technical officer in the Royal Navy, British Army, RAF or Defence Engineering and Science Group when you graduate?

This degree is approved by the Defence Technical Undergraduate Scheme (DTUS).

DTUS is a sponsorship programme for students interested in a scientific, engineering or technical career in the armed forces or the Ministry of Defence.

Find out more on our Armed Forces page.

**Singapore study option (international students)**

Working with the Singapore Institute of Technology, Newcastle University offers full-time BEng Honours degrees in Singapore, in:

- Marine Engineering
- Offshore Engineering
- Naval Architecture

These provide international students with the opportunity to study marine technology subjects from Newcastle University in Singapore.

**About the School**

At Newcastle, you will join a vibrant, global community of staff and students in the School of Engineering.

To support you in your studies, all new students entering year 1 or year 2 will receive:

• a tablet so you can download the online learning resources you’ll need for your course (helping us to make our campus more sustainable);
• a start-up pack containing essential personal protective equipment and text books.

To help you get the most out of university life, you’ll have access to a range of support, including:

• a personal tutor throughout your degree
• a student mentor in your first year

You’ll also benefit from our:

• networking opportunities, through the local joint branch of Naval Architects and the IMarEST, which is hosted in the School
• activities run by our student-run society, WetSOC, including socials, trips abroad, visits from employers and trips to conferences
• the opportunity to go on summer vacation trips, including visits to our marine campus in Singapore

**Course Details**

**Modules for 2019 entry**

**Please note**

The module and/or programme information below is for 2019 entry. Our teaching is informed by research and modules change periodically to reflect developments in the discipline, the requirements of external bodies and partners, student feedback, or insufficient numbers of students interested (in an optional module). To find out more read our terms and conditions.

Module/programme information for 2020 entry will be published here as soon as it is available (end of May 2020).

Our degrees are divided into Stages. Each Stage lasts for an academic year and you need to complete modules totalling 120 credits by the end of each Stage. Further information, including the credit value of the module, is available in each of the module descriptions below.

**What you will study**

**Flexible degree structure**

All of our marine technology students study the same programme for the first year.

It’s possible to transfer between any of our marine technology degrees up to the beginning of Stage 2. However, you must achieve the appropriate academic standard to transfer from a BEng to an MEng degree.

**Core curriculum**

One of our strengths is that we teach engineering in a marine context right from the start through specialist topics such as:

• marine informatics
• marine production management
• materials in the marine environment
• marine mechanics and statistics

To ensure you have a firm foundation in engineering principles we cover topics in core subjects including:

• mechanics
• thermodynamics
• mathematics
• fluid mechanics

Core modules in Stage 2 and beyond are also shared by all of our marine technology students, building on your acquired skills and knowledge in areas such as:

• marine structures
• naval architecture
• hydrodynamics
• marine systems

In Stages 3 and 4 you study further modules specific to the degree specialisation you have chosen.
Modules

Stage 1

**Compulsory modules**
- EEE1007 Electrical Engineering I (For MAR)
- ENG1001 Engineering Mathematics I
- MAR1002 Marine Statistics
- MAR1009 Marine Mechanics
- MAR1010 Marine Engineering I
- MAR1011 Applications of Engineering
- MAR1012 Naval Architecture
- MAR1014 Marine Production Management I
- MAR1015 Materials in the Marine Environment

Stage 2

**Compulsory modules**
- EEE2010 Electrical Engineering II
- ENG2001 Accounting, Finance and Law for Engineers
- ENG2011 Engineering Mathematics II
- MAR2017 Further Naval Architecture
- MAR2018 Marine Engineering II
- MAR2019 Ship Hydrodynamics
- MAR2020 Applications of Engineering II
- MAR2021 Marine Structures I

Stage 3

**Compulsory modules**
- MAR3021 Marine Transport Business
- MAR3027 Future Marine Projects
- MAR3033 Marine Engineering Design
- MAR3037 Marine Engineering III
- MAR3038 Dynamic Modelling and Simulation
- MAR3043 Project and Report in Marine Engineering
- MAR3047 Marine Production Management

**Work Placement (optional)**
You can apply to spend 9 to 12 months on an optional work placement between Stages 3 and 4. You can apply to spend your placement year with any organisation and will receive University support to do so. It will extend your degree by a year and is subject to availability. Find out more on about Work Placements.

You will take the following module:
- NCL3000 Careers Service Placement Year Module

Stage 4

**Compulsory modules**
- MAR8024 Ship Performance at Sea
- MAR8029 Marine Transport and Economics
- MAR8065 Marine Power Systems
- MAR8066 Marine Condition Monitoring
- MAR8067 Marine Machinery Systems
- MAR8076 Commercial Awareness
- MAR8499 Group Project and Report

Teaching and assessment

**Teaching methods**
Contact hours will be a combination of:
- lectures
- seminars from invited speakers in industry and academia
- practical work

We recognise the importance of first-hand experience and organise a variety of visits during your studies. This ensures that you see the application of marine technology in a range of organisations, including local and national marine production facilities, offshore rigs and platform-building sites.

**Assessment methods**
We use a variety of assessment methods including examinations and coursework.

Find out more
Visit our Teaching and Learning pages to read about the outstanding learning experience available to all students at Newcastle University.

Careers

**Marine Technology careers**
The marine technology sector is currently thriving worldwide and in many areas there are acute shortages of skilled personnel.

There is a steady demand for degree-qualified marine experts, in UK-based and multinational companies, including:
- marine engineers
- naval architects
- experts in computer-aided design
- engineering specialists
- production specialists and managers
- surveyors
- research and policy development

With a marine technology degree from Newcastle University you are excellently placed to develop your career in an exciting direction, either within the marine industry, or in other disciplines such as mechanical engineering, finance and management. A number of our students also go on to postgraduate study to pursue research into new technologies.

A large proportion of Marine Technology graduates find employment in:
• the ship and offshore construction industry
• shipping and offshore companies
• government departments
• classification societies
• regulatory agencies and consultancy firms

The development of deep-water oil and gas recovery has increased demand for engineers specialising in the design and operation of offshore vessels and processing plants. Offshore renewable energy generation is also an emerging specialisation.

Each year an increasing number of our graduates also enter careers in the design and manufacture of yachts, luxury cruisers and high-speed passenger craft.

We organise a marine careers fair every year, attracting large graduate recruiters, alongside smaller engineering companies, including:
• Lloyd’s Register
• Babcock
• BP
• BAE Systems
• the Royal Navy

Visit our dedicated website – www.onshoreandatsea.wordpress.com – for information on work placements and graduate opportunities.

Find out more about the career options for graduates from Prospects: The UK’s Official Careers Website.

What our graduates go on to do: employment and further study choices

See what our recent graduates went on to do and view graduate destinations statistics. These statistics are based on what graduates were doing on a specific date, approximately six months after graduation. Take a look at the most recent data available for our graduates.

The destination data is available in varying levels, beginning with the University and moving through Faculty and School down to individual course reports. This final level may give you some useful ideas about possible options after your course or a course you are considering.

Careers and employability at Newcastle

Newcastle University consistently has one of the best records for graduate employment in the UK.

96% of our 2017 UK-domiciled UG/PG graduates progressed to employment or further study within six months of graduating.

85.5% of our graduates are in graduate level employment or further study within six months of graduating.

We provide an extensive range of opportunities to all students through an initiative called ncl+. This enables you to develop personal, employability and enterprise skills and to give you the edge in the employment market after you graduate.

Our award-winning Careers Service is one of the largest and best in the country, and we have strong links with employers.

Fees & Funding

Tuition Fees (UK students)

2019 and 2020 entry:
£9,250
For programmes where you can spend a year on a work placement or studying abroad, you will receive a significant fee reduction for that year.
Some of our degrees involve additional costs which are not covered by your tuition fees.

Please note:
The maximum fee that we are permitted to charge for UK students is set by the UK government.
As a general principle, you should expect the tuition fee to increase in each subsequent academic year of your course, subject to government regulations on fee increases and in line with inflation.
See more information on all aspects of student finance relating to Newcastle University.

Tuition Fees (EU students)

2019 and 2020 entry:
£9,250 You will pay the same tuition fees as UK students for the duration of your course.
For programmes where you can spend a year on a work placement or studying abroad, you will receive a significant fee reduction for that year.
Some of our degrees involve additional costs which are not covered by your tuition fees.

Please note:
As a general principle, you should expect the tuition fee to increase in each subsequent academic year of your course, subject to government regulations on fee increases and in line with inflation.
See more information on all aspects of student finance relating to Newcastle University.

Tuition Fees (International students)

2020 entry*:
£22,800
2019 entry*:
£22,110

Take a virtual tour at www.ncl.ac.uk/tour
**Tuition Fees (International students)**
*Please note:*
You will be charged tuition fees for each year of your degree programme (unless you are on a shorter exchange programme).
The tuition fee amount you will pay may increase slightly year on year as a result of inflation.
If you spend a year on placement or studying abroad as part of your degree you may pay a reduced fee for that year.
See more information on all aspects of student finance relating to Newcastle University.

**Applying to Newcastle University through UCAS**
To apply for undergraduate study at Newcastle you must use the online application system managed by the Universities and Colleges Admissions Service (UCAS).

**UCAS codes for Newcastle University**
- institution name - NEWC
- institution code - N21

**Scholarships and Financial Support (UK students)**
You may be eligible for one of a range of Newcastle University Scholarships in addition to government financial support.

- Newcastle University Scholarships
- Government financial support

**Scholarships and Financial Support (EU students)**
You may be eligible for one of a range of Newcastle University Scholarships in addition to government financial support.

- Newcastle University Scholarships
- Government financial support

**Scholarships and Financial Support (International students)**
We offer a range of scholarships to eligible international students:
- Vice-Chancellor’s International Scholarships
- Vice-Chancellor’s Excellence Scholarships
- Vice-Chancellor’s Global Scholarships

We also offer International Family Discounts which are available for all international students with a close family member who has graduated from or is now studying at Newcastle University.
Some of our subject scholarships and sports scholarships are also available for international students.

**Apply**

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Notes

Find out more...

Go online for information about our full range of degrees
www.ncl.ac.uk/undergraduate

To watch videos about student life in Newcastle, visit
www.ncl.ac.uk/lovenewcastle

Visit www.ncl.ac.uk/tour to take virtual tours of the campus and the city

Book for an Open Day to come and see us in person
www.ncl.ac.uk/openday

Contact us online at
www.ncl.ac.uk/enquiries
or phone +44 (0)191 208 3333

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Full details of the University’s terms and conditions, including reference to all relevant policies, procedures, regulations and information provision, are available at
www.ncl.ac.uk/pre-arrival/regulations

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