Marine Technology with Marine Engineering
MEng Honours

A world-class university in a world-famous city

UCAS code H501
4 Years

www.ncl.ac.uk/ug/H501
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Marine Technology with Marine Engineering

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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 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
- 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 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

The Armstrong Building, at the heart of campus.

Course Details

Modules for 2018 entry

Please note

The module and/or programme information below is for 2018 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 2019 entry will be published here as soon as it is available (end of May 2019).

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

Stage 4

MAR8066  Marine Condition Monitoring
MAR8067  Marine Machinery Systems
MAR8076  Commercial Awareness
MAR8499  Group Project and Report

Teaching and assessment

Teaching methods

Contact methods 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.

Entry Requirements

All candidates are considered on an individual basis.

If your qualifications are not listed here, please see our additional entry requirements web pages to find out which other qualifications are considered.

The entrance requirements below apply to 2019 entry.

Advice on Maths and Science requirements

If you don’t think you will have the exact Mathematics and Science qualifications referred to in our entry requirements by the time you need them, you may not be sure what to do. We hope that the following will help.

- If you already have, or are taking, the A level (or equivalent) Maths and Science qualifications specified in our entry requirements, you should apply for stage 1 (First Year) entry of the engineering degree course in which you are interested.
- If you have a Maths qualification but will not have it at A level (or equivalent) when you start your degree, you should apply for the relevant degree with Foundation Year. We may give you the opportunity to take the Newcastle University Pre-Entry Maths Course* and the
If you have A level Maths (or equivalent) already but not at the required grade, you should contact us for advice. We may decide that you could be considered for Foundation Year entry, or it may be that our engineering courses are not the best options for you.

If you will not have the equivalent of an A level in the Science subject (if any) required, you should apply for the relevant degree with Foundation Year. If you are still not sure, do not worry. Whatever you apply for, our Admissions Tutors will help you decide which is the best route for you. They may therefore make you an offer for a different course (e.g., Foundation Year entry instead of First Year entry) from the one you apply for.

(*The Newcastle University Pre-Entry Maths Course aims to provide the requisite mathematical skills and concepts needed on our engineering degree courses and to prepare students for the modes of learning they will encounter. The materials for the course are delivered electronically and include opportunities to practise your skills. You study the materials in your own time and, when you are ready, you book your exam with the Engineering School to which you have applied. A fee of £150 is payable at the time of booking the exam or shortly before the date set for examination.)

**A Levels**

AAA including Mathematics and at least one of Physics, Chemistry or Further Maths, but excluding General Studies and Critical Thinking. For Biology, Chemistry and Physics A levels, we require a pass in the practical element. GCSE Physics or Dual Award Science (minimum grade B or 6) required if Physics not offered at a higher level.

**Scottish Qualifications**

AAA at Advanced Higher, including Mathematics and at least one of Physics, Chemistry or another Maths. Physics or Chemistry required at Higher Grade B if not offered at Advanced Higher. Two Highers at the required grade (in different subjects to those offered at Advanced Higher) may replace a third Advanced Higher.

Scottish qualifications can be taken in more than one sitting.

**International Baccalaureate**

37 points with Mathematics and at least one of Physics or Chemistry at Higher Level grade 6 or above. Physics required at Standard Level grade 5 or above if not offered at Higher Level.

**Irish Leaving Certificate**

Candidates will normally be considered for Foundation Year only. All applications will be considered on an individual basis.

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**Access Qualifications**

Access qualifications will only be considered for BEng registration in the first instance. Students demonstrating sufficient levels of achievement on the programme may be permitted to transfer registration to the MEng in Stage 2.

**Pearson BTEC Level 3 National Extended Diploma/OCR Cambridge Technical Level 3 Extended Diploma**

Candidates will be considered for Foundation Year only. Please see Engineering with Foundation Year for specific entrance requirements. Students demonstrating sufficient levels of achievement on the programme may be permitted to transfer registration to the MEng in Stage 2.

**Cambridge Pre-U**

D3,D3,D3 in Principal Subjects including Mathematics and at least one of Physics or Chemistry at Standard Level grade 5 or above.

**Extended Project Qualification**

If you offer the Level 3 Extended Project Qualification in a topic relevant to the degree programme, we will vary our offer to recognise this.

**PARTNERS - A Levels**

BBB including Mathematics and at least one of Physics, Chemistry or Further Maths, but excluding General Studies and Critical Thinking. For Biology, Chemistry and Physics A levels, we require a pass in the practical element. GCSE Physics or Dual Award Science (minimum grade B or 6) required if Physics not offered at A or AS level.

**PARTNERS - Pearson BTEC Level 3 National Extended Diploma/OCR Cambridge Technical Level 3 Extended Diploma**

Candidates will be considered for Foundation Year only. Please see Engineering with Foundation Year for specific entrance requirements. Students demonstrating sufficient levels of achievement on the programme may be permitted to transfer registration to the MEng in Stage 2.

The PARTNERS Programme is Newcastle University’s supported entry route for students from schools and colleges in England, Scotland and Northern Ireland. Find out more about the PARTNERS Programme.

**Foundation Year**

If you don’t have the right mathematics and/or science qualifications for direct entry, you can take a Marine Technology Foundation Year:

- **Marine Technology with Foundation Year BEng Honours (J615)**
- **Marine Technology with Foundation Year MEng Honours (J616)**
This will provide you with the knowledge you need to progress to one of our three- or four-year Marine Technology degrees.

**English Language Requirements**
Applicants whose first language is not English require a **minimum score of IELTS 6.0** or equivalent including **5.5 in each of the four elements of the test.**

If you need help to meet our English Language requirements, we can provide support with **extra tuition.**

Read more about **UK visas** and immigration requirements.

**Other International Qualifications**
ABB at A level is typically the minimum required for entry to an undergraduate course. You can check the equivalent grades for qualifications offered in your **country.**

We will also consider your application if you have lower or non-standard qualifications.

**International Foundation Programmes**
If you are an international student and you **do not meet the academic and English language requirements specified above,** you should consider a preparation course at INTO Newcastle University, which will help to prepare you for study on this degree course.

INTO Newcastle University is based on the University campus and offers a range of courses including the International Foundation in Physical Sciences and Engineering.

**Undergraduate Admissions Policy**
See our 2018 Admissions Policy (PDF: 185 KB).

See further policies related to admission.

**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](http://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 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, as measured by RPIX*. See more information on all aspects of student finance relating to Newcastle University.

* RPIX is a measure of inflation in the UK, equivalent to all the items in the Retail Price Index excluding mortgage interest payments.

### Tuition Fees (EU students)

**2019 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:**

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, as measured by RPIX**.

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.

** RPIX is a measure of inflation in the UK, equivalent to all the items in the Retail Price Index excluding mortgage interest payments.

### Tuition Fees (International students)

**2019 entry:**

£22,110

**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, as measured by RPIX**.

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.

** RPIX is a measure of inflation in the UK, equivalent to all the items in the Retail Price Index excluding mortgage interest payments.

### 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
Scholarships and Financial Support (International students)

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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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

UCAS buzzword

Ask your teacher or adviser from your school or college for the UCAS buzzword. You need the buzzword when you register on the Apply system. This makes it clear which school or college you are applying from.

All UK schools and colleges and a small number of EU and international establishments are registered with UCAS.

If you are applying independently, or are applying from a school or college which is not registered to manage applications, you will still use the Apply system. You will not need a buzzword.

Making your application

On the UCAS website you can also find out more about:
- application deadlines and other important dates
- offers and tracking your application

Application decisions and enquiries

Find out more about our admissions process and who to contact if you need help with your application.