Naval Architecture, Ocean and Marine Engineering

Undergraduate course information
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The University of Strathclyde is in the heart of Glasgow – one of the UK’s largest and most vibrant cities.

Glasgow’s music scene, bars and restaurants are renowned and its retail experience is second only to London. Glasgow is consistently voted as the top place to shop in the UK, outside London. With shops ranging from cool vintage to brand names and exclusive designers, there is something for everyone.

The campus is within easy reach of the beautiful scenery of Loch Lomond and the Trossachs National Park, the Scottish Highlands, and the Hebridean Islands to the West. With Glasgow as a base, Strathclyde students are perfectly positioned to take advantage of the opportunity to enjoy a wide range of outdoor activities including walking, cycling, hiking, skiing and sailing.

Live Music

A UNESCO world city of music, Glasgow has been dubbed ‘Europe’s Secret Capital of Music’ by Time Magazine. The music scene encompasses classical and contemporary to Celtic and country. On average, the city hosts 150 music events each week in a wide range of venues, many within walking distance of the University campus. The recently-opened Hydro arena, with a capacity of up to 13,000, is the only UK venue of this scale to be built specifically for concerts.

Culture and Events

As well as a thriving arts and cultural attractions and year-round programme of events, Glasgow is home to more than 20 major museums and galleries, most of which offer free entry. The Riverside Museum, located on the banks of the Clyde, celebrates Glasgow’s renowned industrial heritage and was voted European museum of the year 2013. The building itself is an engineering marvel designed by internationally acclaimed architect Zaha Hadid. The nearby Kelvingrove Art Gallery is among the top three free visitor attractions in Scotland and one of the most visited museums in the UK outside of London.

The city is also the base for Scottish Opera, the Royal Scottish National Orchestra, BBC Scottish Symphony Orchestra, the National Theatre of Scotland, and Scottish Ballet. Edinburgh’s renowned annual festivals are just a 50-minute train journey away.

Green Spaces

‘Glasgow’ means the ‘dear green place’ in Gaelic and with more than 90 public parks and green spaces, the city lives up to its name. Glasgow Green is by far the oldest park in the city and is within five minutes’ walk of the University campus. Pollok Country Park, 10 minutes away by train, is home to one of the greatest art collections ever created by one person. The Burrell Collection, named after the shipping magnate Sir William Burrell, boasts more than 8000 objects including work by major artists Rodin, Degas and Cézanne.

Sporting Highlights

Glasgow is Scotland’s sporting capital and host city for the Commonwealth Games. The city has 23 pools and sports centres to choose from, and for winter sports, Glasgow’s Solar centre is home to one of the biggest indoor ski slopes in the UK. Glasgow has more than 2000km of cycling routes to explore, with a constantly expanding cycling network including the Glasgow to Loch Lomond cycleway. The University’s Centre for Sport & Recreation also provides excellent facilities for a wide range of sports and activities.
Scotland

Scotland is an ancient and industrious country that has had a big impact on the modern world. With Glasgow as a base, Strathclyde students are perfectly positioned to explore everything the country has to offer.

Location

Glasgow is just 40 minutes from the beauty of Loch Lomond and the start of the Highlands, 50 minutes by train from Edinburgh and a short hop by plane to London. It’s a prime location, no matter where you would like to go… and our campus is five minutes from train, subway and bus stations, and just a quick 20 minutes’ shuttle to Glasgow Airport.

Historic Towns

Edinburgh (50 minutes by train)

Edinburgh is a UNESCO World Heritage Site and is widely regarded as one of the most beautiful cities in Europe. Scotland’s capital is home to the Scottish Parliament as well as a dazzling array of museums, galleries and cultural venues. Edinburgh’s famous Hogmanay street party is a must see and Strathclyde students often make the trip through to the capital to ‘see in the bells’ on New Year’s Eve.

The city has inspired a score of famous literary creations including Sherlock Holmes and Harry Potter, and book lovers gather annually at the Edinburgh International Book Festival for author’s talks and book signings. If you happen to be in Edinburgh in August then it will be impossible to avoid the world’s largest arts festival: The Edinburgh Festival Fringe.

Stirling (50 minutes by train)

If you’re a history lover then Stirling is a must see. Home to some of the most momentous events in Scottish history it is a place of romance, royal castles and monuments. The National Wallace Monument is a potent symbol of Scotland that offers stunning views over the southern Highlands after a dizzying climb up its spiral staircase. While in Stirling also visit Stirling Castle’s Renaissance Palace to experience what life would have been like for a Scottish monarch in the 16th century.

The Great Outdoors

Bag a Munro

While in Scotland why not get active and ‘bag a Munro’. Munros are Scottish mountains over 3,000 feet and there are 283 to choose from. A great one to start with is Ben Lomond which is located on the shores of the world famous beauty spot Loch Lomond, only a 40 minute drive from Glasgow.

Ski Scotland

For snow sport loving students Scotland is the perfect destination with five high quality resorts to choose from. The ski resorts are ideal if you are a beginner as you will be able to take advantage of expert tuition. Advanced skiers can tackle the more challenging slopes of the Cairngorm resort, only a two-hour train journey from Glasgow.

The West Highland Way

During the summer months it has become a student tradition to walk the West Highland Way, a challenging trek of 93 miles through some of Scotland’s most breathtaking scenery. Highlights of the walk include world famous destinations such as Loch Lomond and Glencoe. Starting in Milngavie on the outskirts of Glasgow, and ending in Fort William the terrain ranges from lowland moors and dense woodland to the romantic hills mountains of the Scottish Highlands.

Scotland

1872

The first ever international game of football (soccer) is played in Glasgow

1887

Professor James Blyth built the worlds first wind turbine in Scotland

1847

Alexander Graham Bell, inventor of the telephone, is born in Edinburgh

1872

Scotland

1344 m

(4409 ft)

Ben Nevis

is highest mountain in Scotland

700

islands

These include the Orkneys, the Shetland islands and the Hebrides

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Study and Learning

The University of Strathclyde is a world-renowned technological university which excels internationally in teaching, research, knowledge exchange, and industry engagement.

As a Strathclyde student at the Department of Naval Architecture, Ocean and Marine Engineering, you will experience:

- Various styles of teaching space including interactive classrooms with data connections at each seat, allowing lecturers to be sure everyone is keeping up
- Specialised facilities such as industry-standard software, state-of-the-art laboratories and workshops, and the largest towing tank of any UK academic institution
- Campus-wide wireless Internet access, numerous computer labs, and Internet connections in all student residences

Semesters

Teaching takes place over two 12-week semesters, each followed by a revision and examination period. There is normally a two-week break at Christmas and at the start of April, and the academic year ends in early June.

Credits

The University operates a uniform credit-based modular course system. The standard curriculum normally comprises six 20-credit classes per year, usually including certain compulsory classes and a proportion of electives. Students are normally expected to undertake 120 credits a year, which equates to 2,000 hours of study over the 30-week academic year, or roughly 40 hours per week. You choose the classes most suited to your interests and ambitions (within the requirements of specific degrees and constraints of timetabling). This means that, subject to approval, you may be able to change from one course to another, provided the new programme can accept, at least in part, the credits already gained.

Assessment

Your academic performance is assessed by University teaching staff, with external examiners checking and validating the marks awarded. The University pays close attention to first-year students, offering learning support and practical advice to help them improve study skills and manage their workload. In most courses, degree exams provide the main evidence for decisions regarding progress. The main exam diet is held each year in May/June and in August (for resits). Some courses also have an additional diet in January to assess first-semester classes. Degree exams are usually of two or three hours’ duration and can involve solving problems, writing essays and/or completing multiple-choice answer tests.

Some classes are assessed solely on the basis of coursework – marks given for essays, worked examples, laboratory exercises, and reports throughout the year provide a coursework mark. Generally, however, final exam and coursework marks are combined in varying proportions in assessing your performance. Some courses require you to undertake a research project – working individually and/or in groups, you will carry out library research, laboratory exercises, or fieldwork, and present a report on the project.
Student Lifestyle

Student’s Union

Whether you are looking for a great night out, or want to become involved in clubs, sports and volunteering opportunities, the Union is the place for you.

Getting involved in activities at the Union is a great way to meet people and make new friends. If you are interested in sport, there are about 47 teams and sports clubs you can choose from. There are also over 100 non-sporting clubs and societies at Strathclyde. The Executive (elected student representatives) ensures that the Association always represents the views of students and creates a fun and safe social environment.

Where to find us

www.strathstudents.com

The main Union building on John Street is the base for the Students’ Association offices and services and student clubs and societies. There are bars, restaurants and a café as well as the Union shop. Drop in to The Scene for a great menu and a comfortable place to eat, try one of the club nights in the Barony Bar, or have a game of pool in “The Yard”.

The St Paul’s Building houses the Mature Students’ Association, Strathclyde University Muslim Students’ Association, as well as Fusion, the Strathclyde University Radio. It’s just across the road from the main Union building, away from the hubbub of the Union’s bars.

Clubs And Societies

The Union has over 100 clubs and societies ranging from general interest, to course related ones, to political and more! There is something for everyone and it’s a great way to make friends and gain skills and experience at the same time.

Freshers’ Week

The single most fun week in your University life – it’s nine days jam-packed with fun from clubs and sports fairs, gigs, DJs and karaoke to speed meeting and international student events and much more! Information is sent out to all new and returning students. You can also find out what’s going on from the Union website and Facebook.

Sports Union

www.sportsunion.strath.ac.uk

With almost 2,000 members, the Sports Union is one of the best ways to get involved with life at university. The Sports Union has 47 clubs, ranging from football to fencing, skiiey to skydiving and rowing to rugby. For the first two weeks of the year, you can take part in all these clubs free of charge, so there’s no excuse not to try that sport you’ve always been curious about.

There are also plenty of opportunities for development; we help to provide clubs with coaching, transport and equipment, so whether you just want to try, compete against other universities or have dreams of something bigger, we’re here to help you get there. Our teams compete regularly in leagues across Scotland with the chance to progress to knockout stages that could see them playing against the best in the UK. In addition many teams and clubs have trips away, either to compete or simply social tours.

10 floor
Students’ Union on campus

47 Teams and sports clubs

100 Clubs and societies are part of the Students’ Union

Catalina
The Department’s Sigma 33 class yacht, available exclusively to NAOME students
Accommodation

I stayed in halls in first year and found it was the perfect introduction to life at Strathclyde. It’s great because you learn to be independent and make lots of new friends in a short space of time.

The University has 2,000 rooms offering a variety of reasonably priced self-catered flats in the city-centre Campus Village and nearby Merchant City. This means you can live and study in the heart of Glasgow.

At Strathclyde, each hall of residence is only a few minutes’ walk from the main University buildings, and all enjoy excellent access to facilities, including the library, Students’ Union and the Sports Centre, as well as the shops, bars, clubs and cafes of Glasgow’s city centre and Merchant City. During the year there are opportunities to join in many social events, ranging from traditional Scottish celebrations to international events. All rooms have network points offering free internet access and Wi-Fi is also available. Our residences are mixed for both males and females with single sex flats.

Am I eligible for on-campus accommodation?

All students who live beyond 25 miles from the University, have satisfied every condition of entry to the University by 1 September and who will be attending for the whole academic year will be eligible for a place in residence. Visit our website, www.strath.ac.uk/accommodation for the latest rates and to apply for your accommodation online.
The Department

As a former mariner, I wanted to learn the theory behind the practice and as Strathclyde is world-renowned for its programmes and quality of teaching in Naval Architecture, Ocean and Marine Engineering, it was the obvious place for me.

Naval Architecture, Ocean and Marine Engineering

With an illustrious history stretching back to 1882, the Department of Naval Architecture, Ocean and Marine Engineering is a key provider of Marine Technology expertise in the UK and beyond. As civilisation seeks to explore the natural resources in more extreme environments, increase international trade in a sustainable way and harness the raw power of nature, skills and expertise in the field of Marine Technology will only increase.

Building on the City of Glasgow’s rich heritage of Naval Architecture and Shipbuilding, NAOME provides first-rate graduates and research for the Maritime, Oil & Gas and Marine Renewables industries worldwide.

Facilities

The Department is housed in its own building, where the majority of teaching takes place. We have a range of facilities including lecture/project rooms, a computer laboratory, workshops and laboratories. Our close-knit, friendly environment ensures that students and staff quickly get to know one another.

Hydrodynamics Facilities

The Department has the largest hydrodynamics facilities of any academic institution in the UK, used by students, researchers and industry alike.

The towing/wave tank within the hydrodynamics laboratory, located near the West of Scotland Science Park, has the following dimensions: 76m length x 4.5m width x 2.5 depth. The carriage has a computer controlled digital drive with maximum speed of 5m/s. Its wave-maker can generate regular and irregular waves of over 0.5m in height. Typical model tests include resistance of ship hulls, wave impacts on floating and fixed structures, vortex induced vibration and marine offshore renewable energy devices.

A smaller towing/wave tank of 21.6m x 1.6m x 0.65m is located within the Department. It is used mainly for undergraduate teaching and some postgraduate research.

Department Yacht

Students have the exclusive use of the Department’s yacht, “Catalina” located on the Firth of Clyde less than an hour’s travel from the city centre. The 33 foot long yacht can be used for both cruising and racing.

Students are given the opportunity to gain their RYA Day Skipper qualification through a theoretical course offered by the Department, which can contribute to their degree, together with a practical course on the yacht.

"In the 1900’s 1 in 5 ships in the world were built on the River Clyde in Glasgow"
Career and Opportunities

Will you be the engineer to come up with the ground breaking concept that reduces shipping’s environmental impact?

In demand
Our graduates are the most sought after engineers

The Arctic
will soon see oil and gas exploration and international trading routes.

Will you be responsible for designing a vessel strong enough to break ice?

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£25,000 – 30,000
The starting salaries for graduates of the Department

537,500
jobs in the UK are supported by the shipping, ports and maritime business

45,000
workers employed in the UK offshore wind sector by 2020

4 million
jobs and growing in the offshore industry worldwide

90%
of International trade is seaborne.

Will you be part of the team that helps extract hydrocarbons from depths of over 2000 metres?

40 billion barrels
estimated reserves of oil off the coast of West Africa.

120,000
recruits needed in the UK oil and gas sector over the next decade to avoid a skills shortage

90%
of International trade is seaborne.

120,000
people in Europe employed in the construction of the world’s most luxurious and advanced vessels

160,000
recruits needed in the UK oil and gas sector over the next decade to avoid a skills shortage

65,000
offshore wind turbines required by 2030

Will you be part of the growing marine renewable energy industry?

25%
The percentage rise in employment in the oil and gas industry since 2010

6 billion
invested in the development of offshore wind farms in Korea, with total capacity of 2.5GW by 2020

5 million +
Approximate number of people employed globally in the maritime sector

120,000
people in Europe employed in the construction of the world’s most luxurious and advanced vessels

40 billion barrels
estimated reserves of oil off the coast of West Africa.

34,300
employees in the UK marine energy industry, which is forecasted to double over the next decade

65,000
offshore wind turbines required by 2030

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Will you be part of the growing marine renewable energy industry?
Success Stories

The Department is home to the largest wave/towing tank of any UK academic institution.

Naval Architecture and Marine Engineering graduate Phil Kirk works as a Marine Engineer on one of Disney's huge cruise ships in the Bahamas.

Simon Cormack runs “Marine Design International” designing ferries, workboats and leisure craft.

Our department yacht Catalina has been utilised by numerous graduates as a stepping stone to sailing in internationally renowned competitions.

Every year, 30 students from the Department gain practical experience in a summer trip to a Chinese shipyard.

Naval Architecture with Ocean Engineering graduate Daniel Scicluna is supervising the construction of a new Oil & Gas drilling rig in South Korea.

Student Peter Dow won the Science, Engineering and Technology Student of the Year Award and best Maritime Technology Award for his excellent 4th year project on carbon capture and storage.

Professor Chengi Kuo was awarded the Science, Engineering and Technology Lecturer of the Year Award.

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Professor Dracos Vassalos is the recipient of a Sustained Achievement Award from the Royal Academy of Engineering for his work in ship safety.

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Course Overview

Course Structure

Our programmes are based around a common core of engineering and scientific subjects which prepare our students in becoming the next generation of world class engineers.

In the first couple of years you will study what we call the ‘foundations of success’ which is a mixture of core mathematics and basic engineering sciences along with the fundamentals of Naval Architecture, Ocean and Marine Engineering subjects.

From Year 3 onwards your studies will start to specialise according to your chosen specialty with the opportunity to undertake an individual research project in an area which interests you in Year 4.

In Year 5, MEng students will participate in a Group Design Project which essentially replicates the multi-disciplinary nature of solving a challenging technical problem related to current research activities or topics that have a practical relevance to industry.

Course Flexibility

Our degree programmes are designed to be flexible to allow the possibility of transfer between specialties at specific points.

Likewise, if you have entered on a BEng degree and you decide to transfer to MEng, you may do so as long as you have met the MEng requirements.

This flexibility allows you the freedom to fine-tune your choice of degree programme when you are more familiar with the subject.

Course Accreditations

All of our degree programmes are professionally accredited by the Royal Institution of Naval Architects (RINA) and The Institute of Marine Engineering, Science and Technology (IMarEST) on behalf of the UK Engineering Council. The MEng degree, or BEng degree combined with a “matching section” accredited by RINA and IMarEST has become the normal requirement towards recognition as a Chartered Engineer.

Teaching and Assessment

All of the degree programmes consist of lectures, tutorials and a comprehensive set of individual and group design projects. You will also participate in a wide range of computing activities, workshop practicals and a series of model experiments. Visits to ships and shipyards are also made available through our close links with industry.

The academic year is split into two semesters; each semester consists of a twelve-week teaching period, followed by exams. Lecture classes run throughout the programme and are normally assessed through a balance of exam and coursework. A 20-credit taught class will typically have two lectures and one tutorial per week for two semesters. Your final mark for a class is a combination of the coursework and exam mark, typically 70% exam and 30% coursework. Some specialised classes are assessed purely on the basis of submitted coursework.

Quality Teaching & Research

With world-leading expertise, the Department prides itself on innovative teaching that is strongly linked to our research strengths. Staff are internationally recognised for their expertise in the safety of ships and marine installations; reliability of marine structures; advanced structural analysis; offshore engineering; sustainability in marine environment; ship hydrodynamics and computer applications.

High levels of research maintained by the Department help ensure that staff are kept up to date with advances in technology and changes in maritime practice that informs our teaching.

To help you gain the best from your studies, each year programme has an assigned Advisor of Studies who is there to guide you on particular aspects of your current year and assist in choosing optional and elective classes. Each student is also assigned a counsellor, a member of academic staff within the Department, who is available to offer advice and support on both personal and academic matters throughout the duration of study.

Orchid – “A mentoring program for students by students”

Introduced in 2011 by Guy Drori, a Naval Architecture and Ocean Engineering student, the Orchid program aims to assist students to achieve their academic goals and graduate with honours. The program is managed by students for students in a confidential manner.

Orchid’s main objectives are:

• To allow additional support and development for those who do not usually ask for assistance
• To allow students with high achievements to help fellow students
• To increase camaraderie and friendship between students in different years of study

“The course provides the foundation to pursue a career in the offshore industry. Activities such as group work, presentations and analytical exercises build self-confidence and enhance the skills required in an engineer.”
Overview

This degree aims to develop engineers capable of dealing with engineering challenges on a wide range of marine vehicles, with additional skills and understanding in the impact and importance of Marine Engineering on their successful design, construction, repair, and maintenance.

In addition to core Naval Architecture subjects, you will study a range of specialised Marine Engineering subjects such as control theory and practice, electrical systems, design of marine engines (diesel, diesel-electric and gas-turbine), propulsion and shafting systems, system design and simulation, green technology, and fuel cell technology.

Programme Structure

Modules

Year 1
- Engineering Mechanics 1 (20)
- Introduction to Naval Architecture and Marine Engineering (20)
- Analysis Tools for Marine Design (20)
- Engineering Mathematics (40)
- Elective classes (20)

Year 2
- Hydrostatics and Stability of Marine Vehicles (20)
- Marine Engineering Fundamentals (20)
- Principles of Marine Design and Production (20)
- Analysis and Design of Marine Structures 1 (20)
- Engineering Applications for Naval Architects and Marine Engineers (20)
- Engineering Mathematics 3 (20)

Year 3
- Professional Development and Marine Business (20)
- Marine Design (20)
- Hydrodynamics, Resistance and Propulsion (20)
- Marine Engineering Systems and Control (20)
- Analysis and Design of Marine Structures 2 (20)
- The Marine Environment (50)
- Principles and Application of Marine Machinery (50)

Year 4
- Seakeeping and Manoeuvring (20)
- Theory and Practice of Marine CFD (20)
- Finite Element Analysis of Marine Structures (20)
- Marine Power and Electrical Systems (20)
- Marine Refrigeration and Air Conditioning (20)
- Marine Transmission and Propulsion Systems (20)
- Marine Engineering Project (40)

Year 5 (MEng)
- Group Design Project (40)
- Advanced Marine Design (20)
- Waterborne Transportation Systems (20)
- The Marine Regulatory Framework (20)
- Renewable Marine Energy Systems (20)
- On-board Energy Management and Environment Protection (20)
- Advanced Marine Engineering (20)
- Marine Engineering Simulation & Modelling (20)
- Systems Availability and Maintenance (20)

Optional Modules

Numerous optional modules are available to students wishing to expand their studies into related engineering disciplines.
BEng/MEng Naval Architecture with Ocean Engineering

Overview

Ocean Engineering deals with the technical aspects of fixed and floating marine structures and systems related to harnessing ocean resources. These include offshore oil and gas and the rapidly expanding area of ocean renewable energy, as well as other ocean resource activities such as subsea mining and aquaculture. The degree aims to develop engineers capable of dealing with engineering challenges on a wide range of marine vehicles from tankers, bulk carriers, container ships and giant cruise liners to tidal current turbines and oil/gas platforms.

In addition to core Naval Architecture subjects, you will study a range of specialised Ocean Engineering subjects and subjects related to the design of novel ship and offshore structures such as risk management and reliability analysis, station-keeping and control and sub-sea engineering.

Programme Structure

Modules

Year 1
- Engineering Mechanics 1 (20)
- Introduction to Naval Architecture and Marine Engineering (20)
- Analysis Tools for Marine Design (20)
- Elective classes (20)

Year 2
- Hydrostatics and Stability of Marine Vehicles (20)
- Marine Engineering Fundamentals (20)
- Principles of Marine Design and Production (20)
- Analysis and Design of Marine Structures 1 (20)
- Engineering Applications for Naval Architects and Marine Engineers (20)

Year 3
- Professional Development and Marine Business (20)
- Marine Design (20)
- Hydrodynamics, Resistance and Propulsion (20)
- Marine Engineering Systems and Control (20)
- The Marine Environment (10)
- Offshore Oil and Gas Production Systems (10)

Year 4
- Seakeeping and Manoeuvring (20)
- Theory and Practice of Marine CFD (10)
- Finite Element Analysis of Marine Structures (10)
- Ship Structural Dynamics (10)
- Marine Environment Project (10)
- Professional Design Project (20)
- Advanced Marine Design (20)
- Waterborne Transportation Systems (10)
- The Marine Regulatory Framework (10)
- Renewable Marine Energy Systems (10)
- Offshore Energy Management and Environment Protection (10)
- Design and Construction of FPSO’s (10)

Optional Modules

Numerous optional modules are available to students wishing to expand their studies into related engineering disciplines.

Key Information

UCAS code: BEng H512/MEng H513
Start Date: September
Duration: BEng 4 Years / MEng 5 Years
Accreditation: Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST)
Career Destinations: Naval Architect, Ocean Engineer, Subsea Engineer, Marine Surveyor, Offshore Renewables Engineer, Project Engineer

Contact us
- T: +44 (0)141 548 4098
- Email: naome-ug@strath.ac.uk
- Web: www.strath.ac.uk/naome
BEng/MEng Naval Architecture with High Performance Marine Vehicles

Overview

High Performance Marine Vehicles have developed dramatically in recent years. Lighter, faster, stronger, greener and safer vessels are being designed and built using advanced materials and technology combined with creative design engineering. This degree aims to create designers with all the core skills of ship design, construction, operation, and maintenance, along with a particular specialisation in the creative design and engineering of leisure and commercial vessels, ranging from state of the art yachts to the new ultra efficient generation of container ships.

Programme Structure

Modules

Year 1
- Engineering Mechanics 1 (20)
- Introduction to Naval Architecture and Marine Engineering (20)
- Analysis Tools for Marine Design (20)
- Engineering Mathematics (40)
- Elective classes (20)

Year 2
- Hydrostatics and Stability of Marine Vehicles (20)
- Marine Engineering Fundamentals (20)
- Principles of Marine Design and Production (20)
- Analysis and Design of Marine Structures 1 (20)
- Engineering Applications for Naval Architects and Marine Engineers (20)
- Engineering Mathematics 3 (20)

Year 3
- Professional Development and Marine Business (20)
- Marine Design (20)
- Hydrodynamics, Resistance and Propulsion (20)
- Marine Engineering Systems and Control (20)
- Analysis and Design of Marine Structures 2 (20)
- The Marine Environment (10)
- Yacht and Powercraft Design (10)

Year 4
- Seakeeping and Manoeuvring (20)
- Theory and Practice of Marine CFD (10)
- Finite Element Analysis of Marine Structures (10)
- High Performance Marine Structures (20)
- High Performance Sailing Yachts (10)
- High Speed Ships (10)
- High Performance Marine Vehicles Project (40)

Year 5 (MEng)
- Group Design Project (40)
- Advanced Marine Design (20)
- Waterborne Transportation Systems (10)
- The Marine Regulatory Framework (10)
- Renewable Marine Energy Systems (10)
- On-board Energy Management and Environment Protection (10)
- Computational Free Surface Hydrodynamics (10)
- Systems Availability and Maintenance (10)
- Dynamics of High Performance Marine Vehicles (10)

Optional Modules

Numerous optional modules are available to students wishing to expand their studies into related engineering disciplines.

Key Information

UCAS code: BEng H520/MEng H521
Start Date: September
Duration: BEng 4 Years / MEng 5 Years
Accreditation: Royal Institution of Naval Architects (RINA) and the Institute of Marine Engineering, Science and Technology (IMarEST).
Career Destinations: Naval Architect, Boat Designer, Yacht Designer, Marine Surveyor, Project Engineer

Contact us
- Tel: +44 (0)141 548 4098
- Email: naome-ug@strath.ac.uk
- Web: www.strath.ac.uk/naome
Entry Requirements

**Highers**
- BEng: AAAB or AABB including Maths AND Physics and/or Engineering Science AB/BA
- MEng: AAAA or AAABB including Maths (A) Physics (B) and/or Engineering Science (B)

We welcome a combination of Highers and Advanced Highers. Advanced Higher Maths is recommended.

Second year entry or exemption from some classes and exams with Advanced Higher grades similar to A Levels (see below).

**A Levels**
- BEng: Second year entry – AAB including Maths (A) and Physics (B)
  - First year entry – ABB including Maths and Physics (BB)
- MEng: Second year entry – AAA including Maths (A) and Physics (A)
  - First year entry – Entry to BEng only

**International Baccalaureate**
- BEng: 32 points including Maths and Physics at HL5
- MEng: 36 points including Maths and Physics at HL6

**HND**
Entry to BEng in the first instance. Applicants with an HND in a relevant subject with merits or distinctions in analytical modules may be considered for second year entry to the BEng.

How to Apply

All applications should be made through UCAS. The Department accepts a wide range of UK/EU and Overseas qualifications and welcomes applicants from a variety of different backgrounds, with each applicant being considered on an individual basis. In some cases, applicants may be eligible for direct entry into 2nd or 3rd year. Non-standard entry requirements can be found on our website - www.strath.ac.uk/naome.

Please contact us if you need further information on our entry criteria or wish to discuss your particular circumstances.

English Language Requirements

If English is not your first language, you will be required to prove that you have sufficient fluency in English. The normal standard required is IELTS at 6.0 (with no individual element below 5.5) or TOEFL iBT at 85-90 (with minimum individual scores: Listening at 17; Reading at 18; Speaking at 20; and Writing at 17).

Students who obtained their entry qualifications taught in English and those from certain countries may be exempt from this requirement. Applicants who have marginally lower scores of the above tests may be required to attend one or more modules of the pre-sessional English course offered by the University of Strathclyde’s English Language Teaching Division www.strath.ac.uk/elt.

Scholarships and Bursaries

We believe that Higher Education is the route to a better job and quality of life. Every student should have the chance to come to university, and our generous package of support is designed to help you during your studies.

For the most up to date list please refer to the university’s website www.strath.ac.uk/engineering/scholarships.

In addition, within the Department there are several organisations offering sponsorships and scholarships to students each year including RINA, IMarEST, Lloyd’s Register Foundation, American Bureau of Shipping, the Worshipful Company of Shipwrights and the Society for Underwater Technology. New arrangements for scholarships and summer work are added continually so please refer to The Department’s website for more information www.strath.ac.uk/naome.

Visiting Us

Applicants are invited to attend “Insight”, a half-day introduction to the Department, which includes a question and answer session with a member of staff. This provides applicants with the opportunity to discover more about the degree programmes and the Department, take part in activities and meet current staff and students. A number of these events are held between the months of November and March. Please contact us regarding visits at other times.

“The Faculty of Engineering has one of the largest scholarship portfolios in the UK and receiving a scholarship has really helped me to alleviate financial worries, allowing me to concentrate on my university work.”

“...”
How to Find Us

River Clyde attractions
Sport/Music
(15 minutes from campus)

King Tuts Wah-Wah Hut
World-famous live music venue
(15 minutes from campus)

The Style Mile
The retail centre of Scotland
(5 minutes from campus)

George Square
The historic heart of Glasgow
(1 minute from campus)

Merchant City
Music, shops, bars and restaurants
(5 minutes from campus)

Glasgow Green
Riverside park
(5 minutes from campus)

Sports Union
With 47 clubs to choose from there’s something for everyone

Students’ Union
The biggest and best students’ union in Scotland

Naval Architecture, Ocean and Marine Engineering

The Royal College
Home to the Faculty of Engineering

Library
State-of-the-art learning resources over five floors

Campus Village
A home away from home for Strathclyde students

The Barony Hall
Graduation and events venue

How to Find Us

By Air
Glasgow Airport (15-20 minutes drive; regular airport buses) www.glasgowairport.com
Edinburgh Airport (45 minutes drive; regular airport buses) www.edinburghairport.com
Prestwick Airport (50 minutes drive; regular train service) www.glasgowprestwick.com

By Rail
High-speed Intercity rail service between London and Glasgow Central Station (five hours) and between Edinburgh and Glasgow Queen Street Station (50 minutes).

By Coach
Buchanan Bus Station t: +44 (0)141 332 9644

By Car
From England and the south via the M6 and M74 (A74) motorways. Leave the M74 Jct 4 to join the M73 Jct 1. Leave the M73 Jct 2 to join the M8 Jct 8 westbound. Exit the M8 Jct 15 for the University campus.

From Stirling and the north via the M9, M80 (A80) and M8 motorways. Traffic from Fife should follow signs for Kincardine Bridge and then join the M90. Exit the M90 Jct 15 for the University campus. From Edinburgh and the east via the M8. East Lothian and Northumberland traffic on the A1 should take the A69 Carlisle Road and join the M6 at Jct 44, the intersection with the A74 (M) northbound. then M73 and M8.

Parking
It is possible to get a space in a University car park if prior arrangements are made. There is a National Car Park within the campus.

City Travel
Underground (nearest station: Buchanan Street). Bus details from Glasgow Travel Centre, St Enoch Square t: +44 (0)141 226 4826