



**Find out more:**

[www.southampton.ac.uk/  
engineering-undergraduate](http://www.southampton.ac.uk/engineering-undergraduate)

UK enquiries:

[enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)

+44 (0)238059 9699

EU and International enquiries:

[international@southampton.ac.uk](mailto:international@southampton.ac.uk)

+44 (0)238059 9699



UNIVERSITY OF  
**Southampton**

# ENGINEER A NEW WORLD

**ENGINEERING**  
UNDERGRADUATE  
COURSES 2021

FOUNDING  
MEMBER OF THE  
**RUSSELL  
GROUP**



**EXPLORE YOUR  
NEW WORLD**

# OPEN DAYS

For the latest Open Day dates  
and information, go to:

[www.southampton.ac.uk/sb/openday](http://www.southampton.ac.uk/sb/openday)

Updates on other ways to visit us  
can be found at:

[www.southampton.ac.uk/sb/visitus](http://www.southampton.ac.uk/sb/visitus)



**Top 100**

global  
university\*



**Top 20**

UK university\*\*

# CHOOSE SOUTHAMPTON

## TAKE A TOUR

Can't wait for an Open Day? Experience  
Southampton through a virtual tour.

 **Find out more and explore:**  
[www.southampton.ac.uk/sb/virtualopenday](http://www.southampton.ac.uk/sb/virtualopenday)

Choosing your university is about more than finding  
a course. It's about starting the next chapter of your  
life and taking another step towards becoming the  
person you want to be.

At Southampton we share your passion to learn  
and encourage your desire to explore and evolve in  
a friendly and vibrant community.

You'll be inspired, challenged and supported by our  
diverse academic and student community. Together  
we can help you make your mark on the world.

Our courses provide you with the fundamentals  
of engineering alongside practical design modules,  
which enable you to apply your knowledge  
and develop the skills you need to become a  
successful engineer.

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\*QS World University Rankings, 2020  
\*\*Complete University Guide, 2020



# A GLOBAL UNIVERSITY

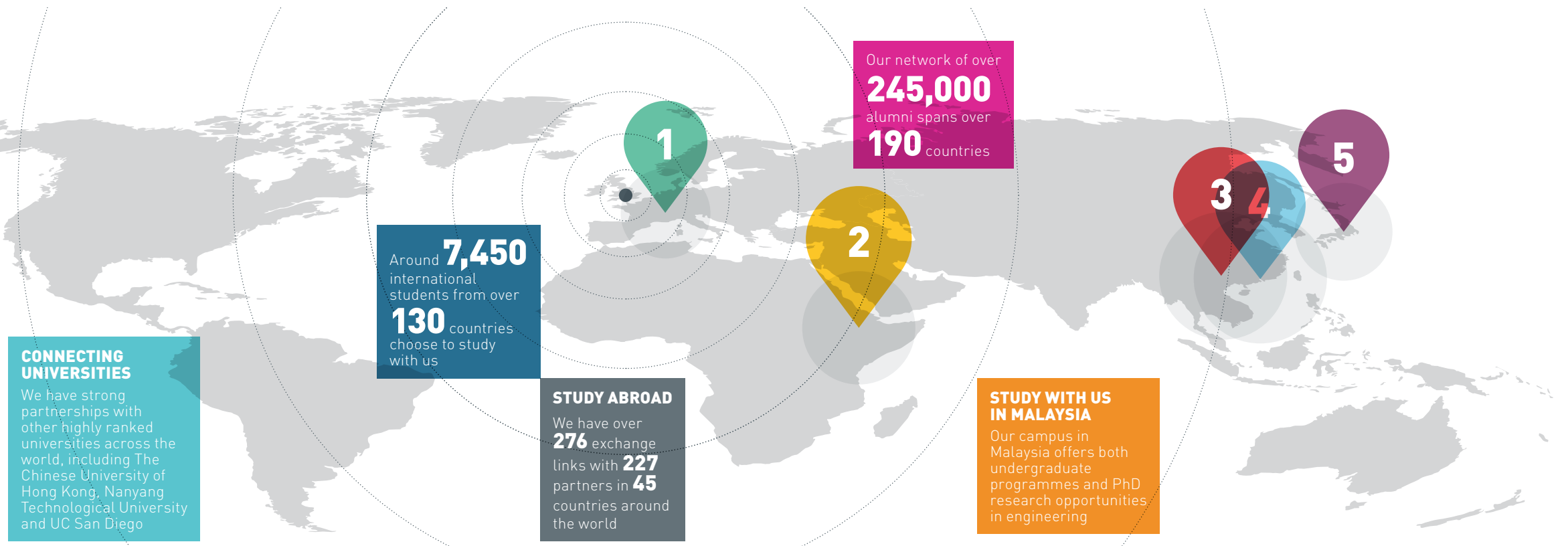


We are part of the **Worldwide Universities Network**: a collaboration of knowledge from around the world

## Southampton is your gateway to the world.

Explore new cultures through study abroad opportunities and international student societies, get advice from our global alumni community, and make friends with people from a multitude of backgrounds.

Our inspiring academics make a difference on every continent, and our business, government and non-government organisation partners span the globe.



### 1 Europe

Engineering students in our Formula Student team are building a single-seat racing car to compete across Europe.



### 2 Ethiopia

A power-assisted handcycle for wheelchair users, designed by mechanical engineering students, scaled one of Africa's tallest mountains in a charity expedition.



### 3 China

Along with ship science coursemates, Jess Carter visited China for 12 days at the end of year two. They visited universities specialising in naval architecture, the Qinhuangdao shipyard, and the Great Wall of China.



### 4 Hong Kong

Civil engineering graduate Joe Tang worked for Hsin Chong Construction group in Hong Kong during a summer placement. This provided the opportunity to gain work experience and to see the workings of the civil engineering industry outside the UK.



### 5 Japan

Acoustical engineering student Conor Gorman spent his summer on a 12-week placement in Hamamatsu, Japan at the Yamaha headquarters. His placement focused on the acoustic and vibration modelling of the CFX, Yamaha's flagship concert grand piano.



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@UoSEngineering  
Follow us for the latest news, research and events at the University



# REACHING NEW HEIGHTS WITH RESEARCH

**Thanks to our research, facilities, experts and connections, you have the opportunity to have unique, hands-on experiences and change lives around the world.**

Our engineering students have helped two amputees to scale one of Africa's highest mountains.

As part of their fourth-year Group Design Project, they helped design a solar-powered off-road handcycle for quadruple amputee and motivational speaker Alex Lewis, and Ethiopian amputee Emebet Ale Dires, to use in their quest to conquer the tallest mountain in Ethiopia, Ras Dashen. The project was recognised with a global National Instruments Student award.

In October 2019, the Wild Wheelchairs Project expedition endured an epic journey through torrential rain and treacherous terrains, and successfully scaled the 4,550-metre peak.

Thomas Parker (MEng Mechanical Engineering, 2018), worked on the project and joined the expedition on their journey up the mountain.

“Working with Alex as a client and having the expedition as an end goal gave the team a boost in motivation,” he says. “It’s been amazing to see the project through field testing to reach The Simien Mountains – far beyond its initial design and prototyping in the University labs.”

The students received guidance and support from project supervisors Professor Andrew Cruden and Dr Lindsay-Marie Armstrong, as well as Dr David Marshall, the University's Wind Tunnel Manager and Southampton graduate, and Dr Clint Styles, who managed the project's final delivery.

Lindsay-Marie says: “It is fantastic to see the skills and knowledge that our students gain over the course of their studies coming together to create something with such an impact; not only for Alex and Emebet, who are conquering their challenges, but also the wider communities who will benefit from the ongoing project to develop a much needed wheelchair factory in Ethiopia.”

Alex Lewis advises the University on the design and testing of the next generation of biomechanical aids.

“

I definitely didn't expect to be doing something like this when I started my degree. I've learned a lot working on the handcycle project, and it's opened my eyes to how I can use my engineering degree to help other people and make a difference.”

Christopher Charalambous  
MEng Mechanical Engineering/Engineering Management, 2018;  
Engineering project leader for the Wild Wheelchairs Project, 2018;  
Business Development at Clarabridge





# OUR PEOPLE

**Our world-leading academics will inspire, challenge and support you throughout your studies. While you are with us, you will be taught by experts with industry experience and lecturers with innovative approaches to education.**

- Become part of a research-intensive community where our discoveries are having global impact.
- Our graduate mentors can help you develop your skills.
- Feel welcome in your new home among a diverse mix of people and cultures.

## **Dr Hanna Sykulska-Lawrence** Lecturer in Aeronautics and Astronautics

Making measurements on space science missions often requires a trade-off between the quality of the data that instruments can collect and the instruments' size and mass. Hanna's research addresses this trade-off by focusing on miniaturising space science instruments. She currently leads projects to miniaturise instruments to explore planetary bodies including Venus and Europa. Previously, she was involved in designing, fabricating and delivering two miniaturised microscopes for NASA, and operated these on the surface of Mars during NASA's Phoenix mission.



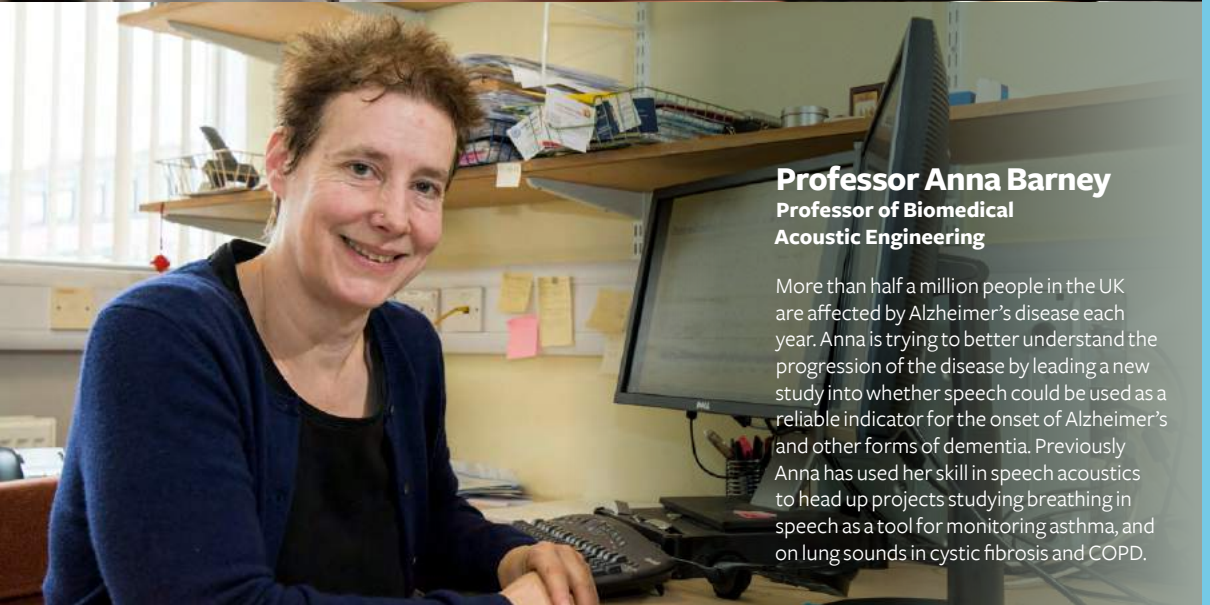
## **Dr Joseph Banks** Performance Sports Engineering Laboratory Lead

Joseph's research focuses on the performance of athletes and equipment in elite sporting applications, and the interaction of engineering structures with fluid loads. After graduating with a degree in ship science, he studied for his PhD, working with British Swimming and UK Sport to help develop a new system for analysing swimming performance. Joseph leads the Performance Sports Engineering Laboratory at the University, and leads on collaborative research projects with the English Institute of Sport and various Olympic sports.



## **Dr Alex Dickinson** Associate Professor of Mechanical Engineering

Alex's research interests are in the biomechanical interactions between medical devices and the body, especially joint replacement implants and prosthetics. Alex is leading an ambitious three-year project to improve access to prosthetic and orthotic services in Cambodia, commonly relating to landmine blast injuries. The cross-disciplinary team is developing digital tools to assess users' residual limb anatomy, biomechanics of gait and typical daily prosthetic limb use, and investigating tools to improve access to services in remote communities.

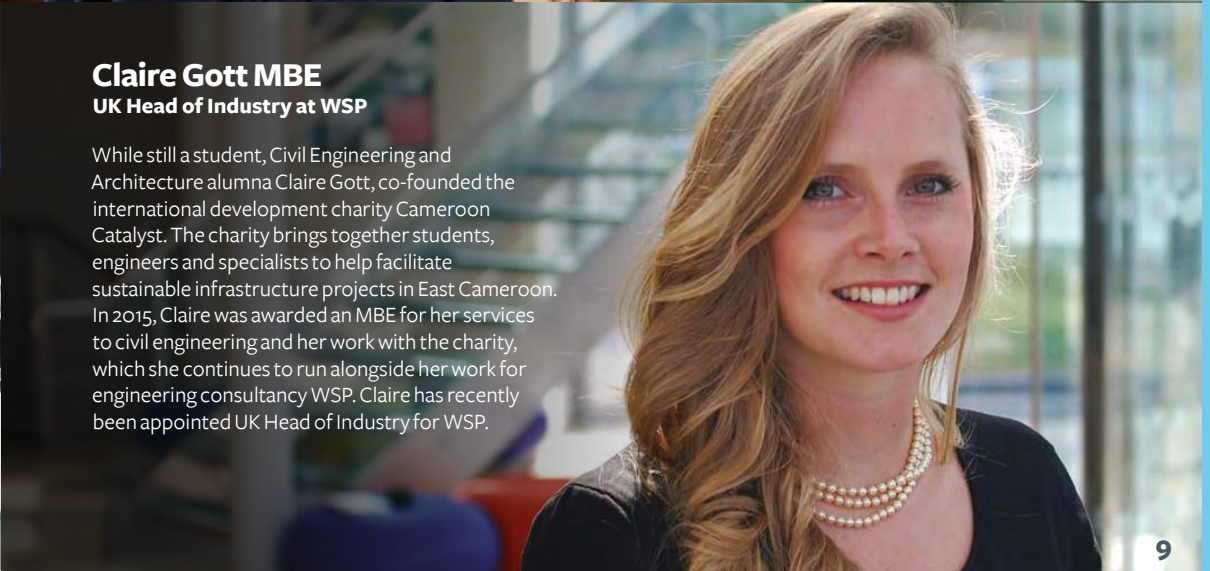


## **Professor Anna Barney** Professor of Biomedical Acoustic Engineering

More than half a million people in the UK are affected by Alzheimer's disease each year. Anna is trying to better understand the progression of the disease by leading a new study into whether speech could be used as a reliable indicator for the onset of Alzheimer's and other forms of dementia. Previously Anna has used her skill in speech acoustics to head up projects studying breathing in speech as a tool for monitoring asthma, and on lung sounds in cystic fibrosis and COPD.

## **Claire Gott MBE** UK Head of Industry at WSP

While still a student, Civil Engineering and Architecture alumna Claire Gott, co-founded the international development charity Cameroon Catalyst. The charity brings together students, engineers and specialists to help facilitate sustainable infrastructure projects in East Cameroon. In 2015, Claire was awarded an MBE for her services to civil engineering and her work with the charity, which she continues to run alongside her work for engineering consultancy WSP. Claire has recently been appointed UK Head of Industry for WSP.





# WORLD-CLASS ENGINEERING FACILITIES

You'll use our state-of-the-art engineering facilities which allow you to do a wide range of physical testing and analysis, computational modelling and simulation, imaging, and manufacturing.



01

## 01 Towing tank

Assess safe limits in extreme waves and the energy efficiency of hull designs in our 138m towing tank, the largest university towing tank in the UK.

## 02 Manufacturing, workshops and design studios

You can design, manufacture, and test your prototypes in our Engineering Design and Manufacturing Centre, design studios, and student workshops. Extensive facilities include 3D printers, CNC equipment, CAD/CAM software, and a training workshop.

## 03 National Infrastructure Laboratory

Our new £48m National Infrastructure Laboratory was funded by government and industry as part of the UK Collaboratorium for Research in Infrastructure and Cities (UKCRIC). The Laboratory houses facilities for testing large-scale structures, components and materials, with a major focus on transport infrastructure, particularly rail. Our undergraduate students use the facility to carry out experiments and independent and group projects.

## 04 Wind tunnel complex

You can use our wind tunnel complex for your aerodynamics modules and project work. Our largest wind tunnel – the RJ Mitchell Wind Tunnel – has been at the forefront of aerodynamics research for

over 35 years. It has been used for high-performance testing by Formula One teams and Olympic athletes.

## 05 Boeing Flight Simulator

Test your aircraft design projects in our flight simulator, funded by Boeing. It plays an important role in the design, testing and manufacturing of air vehicles.

## 06 Rayleigh Laboratories

You can test and analyse your acoustics project work in the Rayleigh Laboratories. They include two reverberation chambers, a large anechoic chamber, and a 40 loudspeaker audio laboratory.



02



03



04



05



06

Find out more:  
[www.southampton.ac.uk/  
engineering/facilities](http://www.southampton.ac.uk/engineering/facilities)



# INDUSTRIAL PLACEMENT YEAR

Enhance your employability with an Industrial Placement Year, an additional year-long paid placement in an engineering organisation.

When you're on placement, you'll apply the knowledge and skills that you've developed during your degree gaining the attributes to become a professional engineer after graduation.

Like some of our current students, you could be on placement at organisations like Airbus Defence and Space, Dstl, Jaguar Land Rover, Leonardo, Rolls-Royce, Scuderia Toro Rosso, Williams F1, or WSP.

## Key features:

- You'll find your own placement, relevant to your degree, and be guided by academic and careers staff
- You'll be supported by a placement tutor during your placement
- To monitor your experience, you'll have two progression reviews during your placement
- You'll benefit from a reduced fee of 20 per cent of the standard tuition fee during your placement year
- Your successful placement will be included on your degree certificate
- You'll stay enrolled as a student during the year, with access to the usual University services, benefits and support
- You'll be assessed via an individual reflective report and a presentation to staff and your peers

UCAS codes for the Industrial Placement Year option are listed on each course page. You can also take the Placement Year with a Foundation Year (see page 68).



Find out more:

[www.southampton.ac.uk/engineering/ipy](http://www.southampton.ac.uk/engineering/ipy)



Megan Hickling  
Placement: Lateral Naval Architects



Wataru Kawamoto  
Placement: Force India Formula One Team

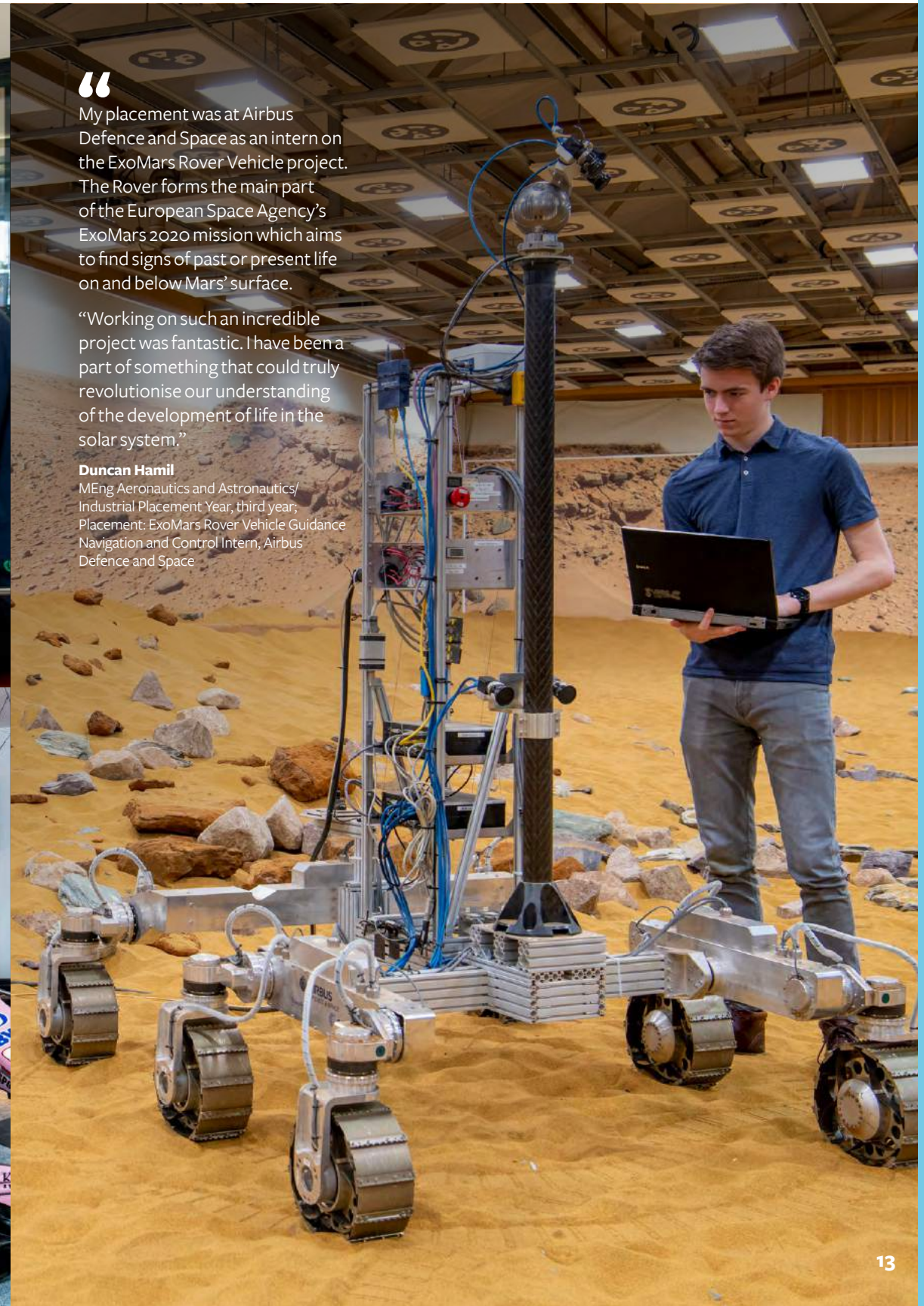
“

My placement was at Airbus Defence and Space as an intern on the ExoMars Rover Vehicle project. The Rover forms the main part of the European Space Agency's ExoMars 2020 mission which aims to find signs of past or present life on and below Mars's surface.

“Working on such an incredible project was fantastic. I have been a part of something that could truly revolutionise our understanding of the development of life in the solar system.”

**Duncan Hamil**

MEng Aeronautics and Astronautics/  
Industrial Placement Year, third year;  
Placement: ExoMars Rover Vehicle Guidance  
Navigation and Control Intern, Airbus  
Defence and Space





# WHAT HAS YOUR NEW WORLD BECOME?

## Working with the Formula One World Champions

“The combination of practical engineering projects, learning from leading researchers, and being part of Formula Student allowed me to develop the skills I needed to secure a placement in Formula One.

“Southampton is well respected in industry, which helped my application stand out giving me the opportunity to prove myself at interview.

“From day one I was fully integrated into the team, trusted with the opportunity to contribute to tangible performance gains for the race car, all the while learning what it takes to be successful in the industry.”

### Chris Sheffer

MEng Aeronautics and Astronautics, fourth year;  
Placement: Aerodynamicist, Mercedes-AMG  
Petronas Formula One



Find out more:  
[www.southampton.ac.uk/ug/newworld](http://www.southampton.ac.uk/ug/newworld)



# ENGINEERING AT SOUTHAMPTON

At Southampton, you will learn by doing, by studying the theoretical principles of engineering alongside practical design modules and projects. Each year you will take part in design projects and modules to develop your design skills and abilities.

We place an emphasis on innovation, process and communication, and support the realisation of unique design solutions. This creative approach will provide you with the confidence, skills and expertise needed to lead the next generation of engineers.

## Acoustical Engineering

Concerned with understanding, controlling and using sound and vibration, applications include sound reproduction, reducing noise from aeroplanes and medical ultrasound.

Find out more on page 18.

## Aeronautics and Astronautics

Encompassing a broad range of disciplines, it involves all aspects of the specification, design, and construction of aerospace vehicles, including airframes, jet engines, satellites, and rockets.

Find out more on page 24.

## Chemical Engineering

This focuses on the science of turning one thing into another, for instance raw materials into useful, everyday products. It involves working out processes for this, using sustainable technologies and protecting the environment.

Find out more on page 36.

## Civil Engineering

Involving the planning, design and construction of structures, facilities and infrastructure required for modern society, it tackles challenges from sustainable energy to waste management and improving transportation networks.

Find out more on page 38.

## Mechanical Engineering

Involving the analysis and design of objects and systems that are often in motion, it derives its breadth from the need to design and manufacture everything from microscale sensors to large-scale renewable energy systems.

Find out more on page 44.

## Ship Science

This is the study of vehicles and structures that use the ocean for transport, recreation, and harnessing of marine resources. It involves the design, analysis, and manufacture of large and complex moveable systems.

Find out more on page 58.

## Engineering Foundation Year

A one-year introduction to mathematics, mechanics, computer programming, electricity and electronics and engineering principles. It provides the skills required to study successfully for an undergraduate degree, for students without traditional entry requirements.

Find out more on page 68.



TOP  
10

for Engineering

Complete University Guide, 2020

To find out about our Electrical and Electronic Engineering, Computer Science and Software Engineering courses, please visit:

[www.southampton.ac.uk/engineering/undergraduate](http://www.southampton.ac.uk/engineering/undergraduate)



# ACOUSTICAL ENGINEERING

## Choose Southampton

- Learn from the very best at the Institute of Sound and Vibration Research (ISVR)
- Get hands-on experience in one of the largest anechoic chambers in any UK university
- Take part in practical design modules throughout your degree, solving engineering challenges in a sustainable, ethical, human-centred and holistic way
- After you graduate, you could join past students at organisations like Arup, Bentley Motors, Dolby, Dyson, Jaguar Land Rover, or Rolls-Royce



Join the only acoustical engineering courses that are accredited by the Institution of Mechanical Engineers and the Institute of Acoustics

# 97%

are employed or in further study within six months of graduation

Latest DLHE, 2015/16-2016/17

Acoustical engineering is the application of acoustics - the science of sound and vibration - in technology. It has broad applications, from the design of cars, 3D-audio systems and concert halls, to reducing aircraft noise and using ultrasound to fight antimicrobial resistance.

## Course structure

You'll learn the fundamentals of engineering, whilst developing specialist knowledge of acoustics, vibrations and their human effects.

### BEng/MEng Acoustical Engineering

You'll get the same comprehensive foundation from both the three- and four-year degree, as the first three years are the same. You will study specialist modules in acoustics and audio signal processing, alongside the core principles of mechanical engineering, including mechanics and electronics.

Advanced modules in your third year will deepen your understanding of acoustics with optional modules allowing you to focus on areas of your own interest.

You'll also carry out an individual project. Your project could focus on a range of topics, for instance studying

the effect of wing shielding on aircraft engine noise, the creation of novel sound effects or marine mammal calls.

If you choose the four-year degree, your final year will include advanced acoustics and engineering modules, and a group design project.

You can create your own project or choose from a range of proposed projects. Previous projects have included the design and development of personal spatial audio systems, novel underwater acoustic sensors, novel car audio systems and the reduction of drone noise. Your project could be linked to our current research or supported by industry, for example by Dyson or KEF audio.

### BSc Acoustics with Music

You can balance your interest in sound and technology with the study of music on our BSc Acoustics with Music.

During your first two years you'll develop your core understanding of

acoustics and audio signal processing, while studying both engineering and music modules.

In your first-year engineering modules you'll develop your design and programming skills, preparing you to design, build, and test acoustical engineering systems, components, and mechanisms.

In your second year, you'll deepen your understanding of acoustics, sound and mathematics, and learn about audio engineering technology.

In the third year, you'll do an engineering or music-based individual project, and take specialist acoustics and music modules. Your project could focus on a range of topics from the potential effect of orchestral sound levels on hearing loss, to subjective and objective comparisons of grand piano sounds.

### Placements

You can enhance your employability with a year-long paid placement and get vital experience to prepare for your career. As an acoustical engineering student you can take the engineering-specific Industrial Placement Year (see page 12), and as an acoustics with music student you can take the Year in Employment. You can stand out in the workplace with other work experience opportunities including summer placements.

## Subject highlights ✓

### ENGINEERING FACILITIES

You can use our extensive facilities which include student design studios and workshops, anechoic and reverberation chambers, an aeroacoustic wind tunnel, listening room, virtual acoustics laboratory, and a professional manufacturing centre.

### ACCREDITATION

Graduate from the only acoustical engineering courses that are accredited by both the Institution of Mechanical Engineers and the Institute of Acoustics. Our courses offer you a route to chartered status.

➔ For more details about our courses visit:  
[www.southampton.ac.uk/acoustics-ug](http://www.southampton.ac.uk/acoustics-ug)



## Key information

### UCAS codes:

**HH72** | 3 years

**H34P** | 4 years with Industrial Placement Year

**Course lead:** Dr Keith Holland

**Start date:** September

### Typical offers require

**A levels: AAB** including grades AA in mathematics and an additional required subject<sup>†</sup>. Where an EPQ is taken in addition to three A levels, you will also receive the following offer: **ABB** including mathematics (minimum grade A) and one other required subject<sup>†</sup>, plus grade A in the EPQ

**IB:** Pass, with **34** points overall with 17 points required at Higher Level, including 6 in mathematics: analysis and approaches or 7 in mathematics: applications and interpretation, and 6 in either chemistry or physics (all at Higher Level)

<sup>†</sup>Either chemistry, electronics, further mathematics or physics. Pass in the associated science Practical is required where applicable

### Selection process:

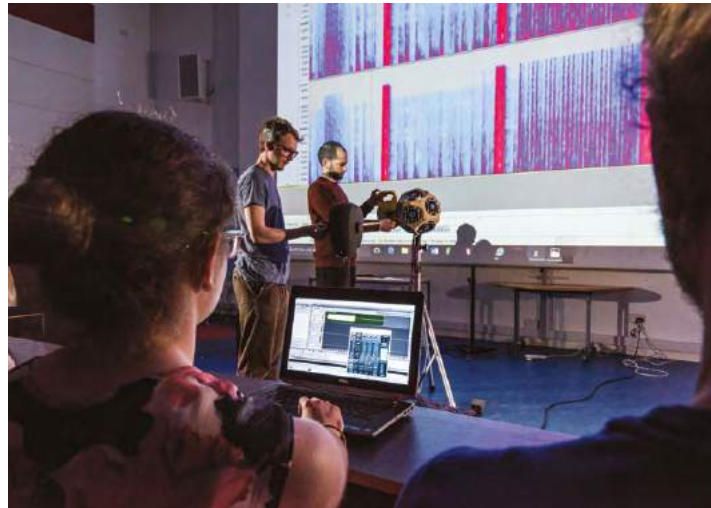
UCAS application

**Accreditation:** Our Acoustical Engineering degrees are accredited by the Institution of Mechanical Engineers and the Institute of Acoustics, and offer a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# BEng ACOUSTICAL ENGINEERING

You'll develop specialist knowledge in acoustics and engineering during this three-year course. You'll be able to choose from a range of specialist modules in your final year. You can also transfer to the four-year MEng (subject to progress and any visa conditions).



## Course structure

### Year one | Modules

- Acoustics I
- Design and Computing
- Electrical and Electronic Systems
- Mathematics
- Mechanics, Structures and Materials
- Thermofluids

### Year two | Modules

- Acoustics II
- Audio and Signal Processing
- Electronics, Drives and Control
- Engineering Management and Law

- Fluid Mechanics
- Mathematics
- Mechanics, Machines and Vibration
- Systems Design and Computing

### Year three | Modules

- Acoustical Engineering Design
- Human Response to Sound and Vibration
- Individual Project
- Noise Control Engineering

Plus module options including Electroacoustics, Architectural Acoustics, Ocean Acoustics and Biomedical Ultrasound

**For the full range of modules please visit the website**

# MEng ACOUSTICAL ENGINEERING

Like the three-year course, you'll develop specialist knowledge in acoustics and engineering. The additional fourth year allows you to study further specialist acoustics modules and to work on a master's-level group design project.



## Course structure

### Year one | Modules

Refer to BEng Acoustical Engineering on page 20 for modules

### Year two | Modules

Refer to BEng Acoustical Engineering on page 20 for modules

### Year three | Modules

Refer to BEng Acoustical Engineering on page 20 for modules

### Year four | Modules

- Group Design Project
  - Professional Aspects of Engineering
- Plus module options including Aeroacoustics, Musical Instrument Acoustics, and Vehicle Powertrain, Noise and Vibration

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**H722** | 4 years

**FF38** | 5 years with Industrial Placement Year

**Course lead:** Dr Keith Holland

**Start date:** September

### Typical offers require

**A levels: AAA** including mathematics and an additional required subject<sup>†</sup>. Where an EPQ is taken in addition to three A levels, you will also receive the following offer: **AAB** including grades AA in mathematics and one other required subject<sup>†</sup>, plus grade A in the EPQ

**IB:** Pass, with **36** points overall with 18 points required at Higher Level, including 6 in mathematics: analysis and approaches or 7 in mathematics: applications and interpretation, and 6 in either chemistry or physics (all at Higher Level)

<sup>†</sup>Either chemistry, electronics, further mathematics or physics. Pass in the associated science Practical is required where applicable

### Selection process:

UCAS application

**Accreditation:** Our Acoustical Engineering degrees are accredited by the Institution of Mechanical Engineers and the Institute of Acoustics, and offer a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/acoustics-ug](http://www.southampton.ac.uk/acoustics-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/acoustics-ug](http://www.southampton.ac.uk/acoustics-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Key information

UCAS code: HW73

Course lead: Dr Keith Holland

Start date: September

Duration: 3 years

### Typical offers require

**A levels: AAB** including mathematics (minimum grade A) and either chemistry, electronics, further mathematics or physics (minimum grade A) and music or a third subject† (minimum grade B). Where an EPQ is taken in addition to three A levels, you will also receive the following offer: ABB including mathematics (minimum grade A), one subject from the above list and music† plus grade A in the EPQ

**IB:** Pass, with 34 points overall, with 17 points required at Higher Level including 6 in mathematics: analysis and approaches or 7 in mathematics: applications and interpretation, 6 in either chemistry or physics and 5 in music or a third subject (all at Higher Level)†.

† Applicants not taking a level 3 qualification in music e.g. A level music, will require Grade 6 music theory or demonstrated equivalent standard. Applicants wishing to pursue optional music performance modules will be required to achieve a Grade 8 in music practical or demonstrated equivalent standard

### Selection process:

UCAS application

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# BSc ACOUSTICS WITH MUSIC

You can combine musical theory and performance with acoustical engineering on this unique degree. The modular nature of the course means you can choose your perfect balance of acoustics and music.



## Course structure

### Year one | Modules

- Acoustics I
- Design and Computing
- Mathematics

Plus module options including Dynamics, Introduction to Music Technology, Exploring Music I, Electrical and Electronic Systems, Fundamentals of Analysis, Counterpoint and Harmony, and First Year Performance Tuition

### Year two | Modules

- Acoustics II
- Audio and Signal Processing
- Mathematics

Plus module options including System Design and Computing, Jazz Theory, Studio Techniques I, Conducting, Arranging, and Music Therapy I: Fundamentals

### Year three | Modules

- Individual Project or Research Project

Plus module options including Musical Instrument Acoustics, Architectural and Building Acoustics, Human Responses to Sound and Vibration, Electroacoustics, Commercial Composition, Studio Techniques II, Orchestration, and Ensemble Performance

**For the full range of modules please visit the website**



## Find out more

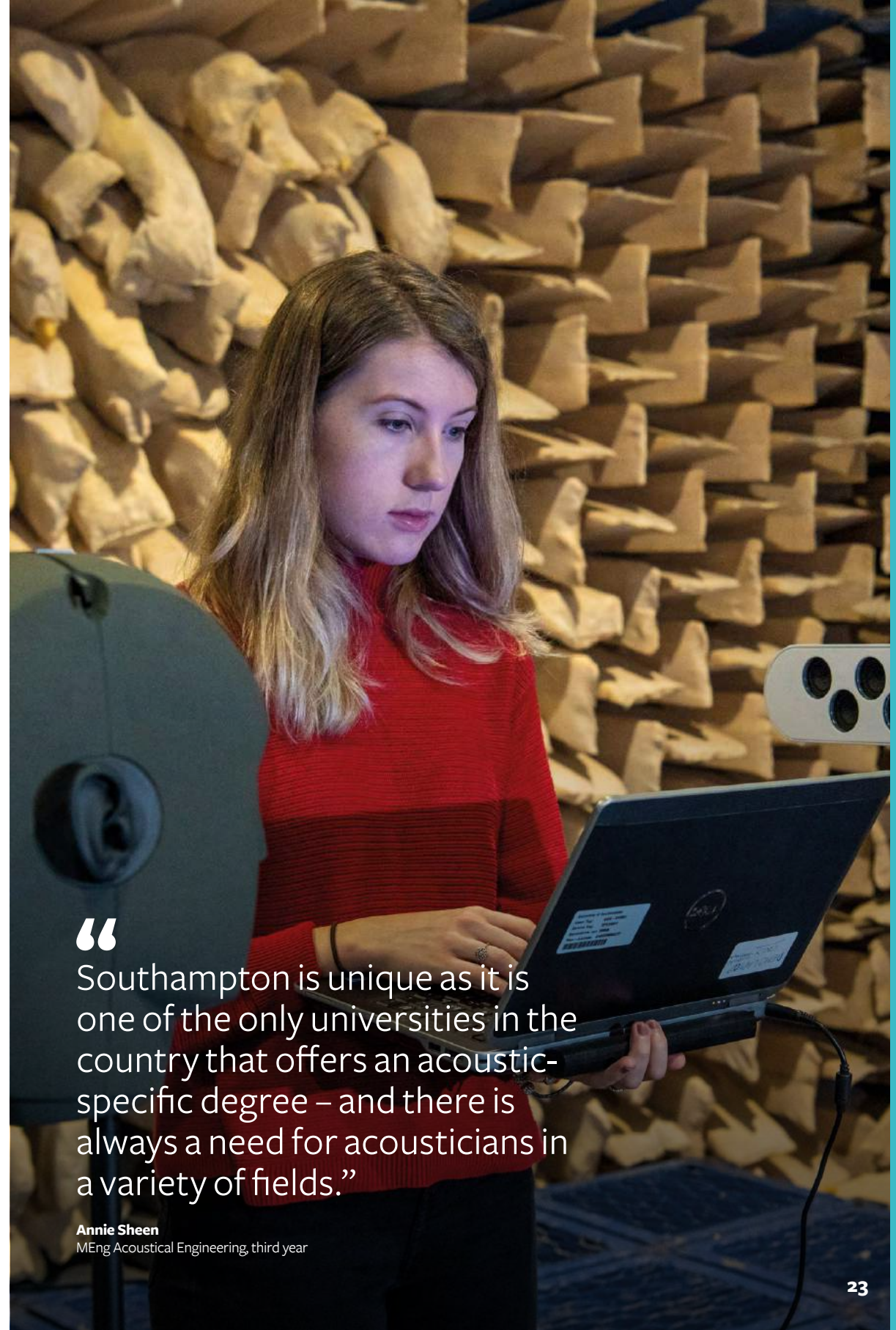
For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/acoustics-ug](http://www.southampton.ac.uk/acoustics-ug)

Or to have specific questions answered:

T: +44 (0)23 8059 9699

E: [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



Southampton is unique as it is one of the only universities in the country that offers an acoustic-specific degree – and there is always a need for acousticians in a variety of fields.”

**Annie Sheen**

MEng Acoustical Engineering, third year



# AERONAUTICS AND ASTRONAUTICS

## Choose Southampton

- Get hands-on experience in our world-class facilities including our wind tunnel complex, used by Formula One and Olympic athletes
- Take part in practical design modules throughout your degree, solving engineering challenges in a sustainable, ethical, human-centred and holistic way
- Learn to fly with the Students' Union and University Air Squadron
- After you graduate, you could join past students at organisations like Airbus, Dstl, Dyson, European Space Agency, Jaguar Land Rover, Rolls-Royce, Surrey Satellite Technology and Formula One teams
- We are a designated university for the Defence Technical Undergraduate Scheme, enabling you to receive military sponsorship



Join the only Russell Group university to offer degrees that combine both aeronautics and astronautics

# No.6

in the UK  
Complete University  
Guide, 2020

Focused on fast-moving aircraft and spacecraft in the Earth's atmosphere and outer space, aeronautics and astronautics covers advanced aeronautics and space applications, preparing you to design future aircraft, UAVs, race cars, jet engines, satellites and rockets, without limiting your knowledge to just one field.

## Course structure

### First and second year

Your first two years are the same across the BEng and MEng courses. You'll focus on core engineering science, such as aerodynamics, propulsion systems, mechanics of flight, fluid dynamics and control, giving you a professional grounding for the design and operation of air vehicles and spacecraft.

In your first year, you'll develop your design and programming skills, preparing you to build and test engineering systems, components and mechanisms. You'll also learn manufacturing skills in our workshops so that you can make your ideas a reality.

In your second year, you'll go on a one-week practical course in flight testing, where experiments are performed on board a Jetstream flying laboratory aircraft.

There are also hands-on teaching laboratories such as the supersonic ramjet, turbojet and rocket engine demonstrations. You'll also take part in a team design project, for instance to design and build an instrumented multicopter UAV and control system.

### Third year

Your third year modules will deepen your understanding of aircraft design, including their environmental impacts. You'll also do an individual project, which brings together everything

you've learned. Your project could focus on a range of topics, from studying the deflection of asteroids, 3D-printed metal jet engines to modelling the aerodynamics of race cars for increased performance.

### Fourth year

On a four-year MEng you can choose a broad-based degree, or one of seven specialist themed degrees covering the full range of aerospace fields. You'll take advanced modules and take part in a master's-level group design project, applying your engineering knowledge to solve a real-world problem.

Create your own project or choose from a range such as the design and development of a hybrid tail-sitter aircraft for humanitarian aid missions, a fuel-efficient ion thruster for spacecraft and the aerodynamic optimisation of a touring car. Your project could be linked to our current research or supported by industry, for instance Airbus or the European Space Agency.

### Placements

Enhance your employability with a year-long paid placement in an engineering organisation and gain vital experience to prepare for your career (see page 12).

## Subject highlights ✓

### ENGINEERING FACILITIES

You'll have access to our extensive facilities, which include student design studios and workshops, the largest wind tunnel in any UK university, state-of-the-art jet engine and space propulsion facilities, a flight simulator and a professional manufacturing centre.

### ACCREDITATION

Our courses are fully accredited by the Royal Aeronautical Society and Institution of Mechanical Engineers, and offer a route to chartered status.

### INDUSTRY LINKS

Your degree will be aligned to the UK Space Agency Civil Space Strategy and you'll benefit from our strong links with the European Space Agency, Rolls-Royce, and other major aerospace organisations including Formula One teams.

➤ For more details about our courses visit:  
[www.southampton.ac.uk/aero-ug](http://www.southampton.ac.uk/aero-ug)



## Key information

### UCAS codes:

**H422** | 3 years  
**H40P** | 4 years with Industrial Placement Year

**Course lead:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

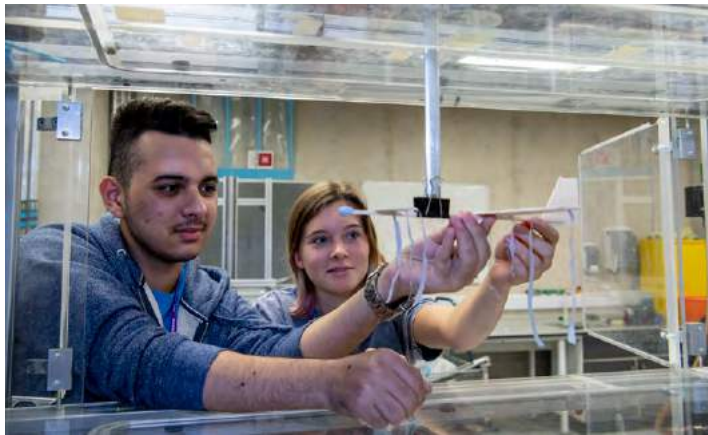
**Selection process:** UCAS application

**Accreditation:** Our BEng course is accredited by both the Royal Aeronautical Society and the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# BEng AERONAUTICS AND ASTRONAUTICS

On this three-year course, you'll study the essential principles of aerospace engineering, including aerodynamics, astronautics and propulsion, as well as the economic, legal and environmental issues associated with aircraft and spacecraft.



## Course structure

### Year one | Modules

- Introduction to Aeronautics and Astronautics
- Design and Computing
- Electrical and Electronic Systems
- Mathematics
- Mechanics, Structures and Materials
- Thermofluids

### Year two | Modules

- Aerodynamics
- Astronautics
- Engineering Management and Law

- Materials and Structures
- Mathematics
- Mechanics of Flight
- Propulsion
- Systems Design and Computing

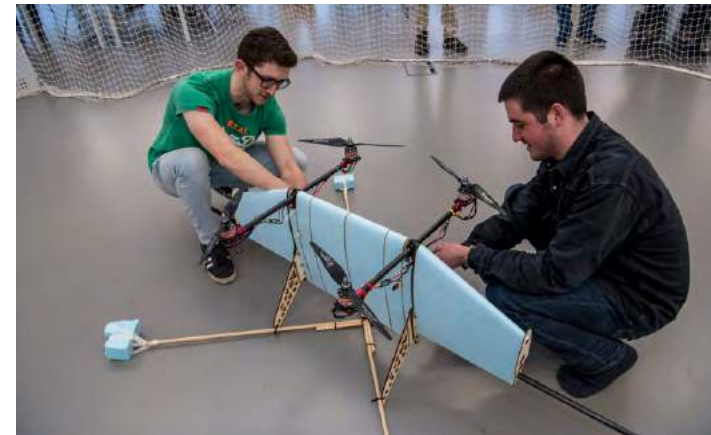
### Year three | Modules

- Aerothermodynamics
- Aircraft Structural Design
- Aerospace Control Design
- Individual Project
- Introduction to Aircraft Design
- Plus two additional module options

**For the full range of modules please visit the website**

# MEng AERONAUTICS AND ASTRONAUTICS

Study advanced aerospace engineering on this four-year integrated master's, with the ability to specialise your degree in years three and four. You'll also carry out a master's-level group design project.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design

- Individual Project
- Introduction to Aircraft Design
- Plus two additional module options

### Year four | Modules

- Group Design Project
- Advanced Management
- Plus module options in Race Car Aerodynamics, Human Factors in Engineering, Spacecraft Propulsion, Avionics, and Applications of CFD

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**H401** | 4 years  
**H414** | 5 years with Industrial Placement Year

**Course lead:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

**Selection process:** UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

For more details about your course such as module information and course structure, visit

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Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



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## Key information

### UCAS codes:

**H490** | 4 years  
**HH41** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng AERONAUTICS AND ASTRONAUTICS/AERODYNAMICS

You'll develop the knowledge and skills to analyse and control aerodynamic behaviour. Your third and fourth years will focus on aerodynamic theory and practice for the design of vehicles, wings and propulsion systems. When you graduate, you'll be prepared for both the aerospace and Formula One industries.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Introduction to Aircraft Design
- Wing Aerodynamics

Plus one additional module option

### Year four | Modules

- Group Design Project
- Advanced Management

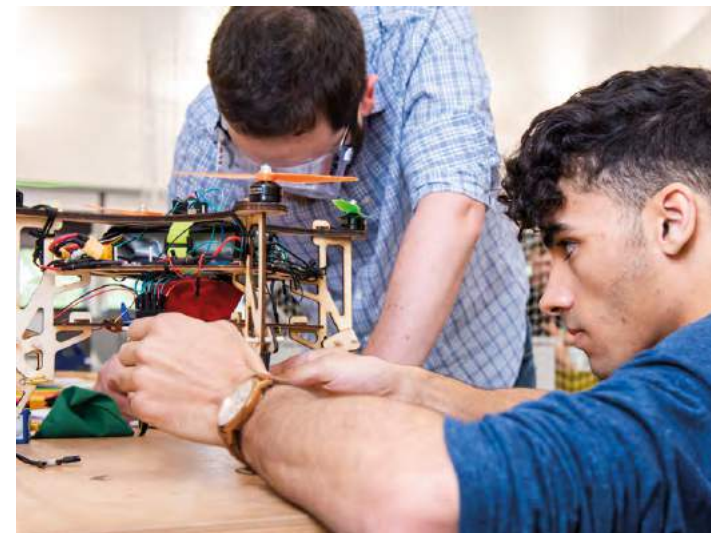
Plus at least two theme-specific modules from: Applications of CFD, Experimental Methods for Aerodynamics, Hypersonic and High Temperature Gas Dynamics, Turbulence: Physics and Modelling, and Race Car Aerodynamics

Plus a further module option, for instance Industrial Law and Human Factors in Engineering

**For the full range of modules please visit the website**

# MEng AERONAUTICS AND ASTRONAUTICS/AIRVEHICLE SYSTEMS DESIGN

You'll focus on aeronautics with an emphasis on rotorcraft, fixed-wing aircraft and engine design. Using a complete vehicle systems approach, you'll also learn about modern design, search and optimisation techniques. When you graduate, you'll be prepared for a career in air vehicle design.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Introduction to Aircraft Design
- Wing Aerodynamics

Plus one additional module option

### Year four | Modules

- Group Design Project
- Advanced Management

Plus at least two theme-specific modules from: Aircraft Propulsion, Aircraft Structures, Design Search and Optimisation, Powered Lift, and Systems Reliability

Plus a further module option, for instance Industrial Law and Human Factors in Engineering

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**H491** | 4 years  
**H41H** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

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## Key information

### UCAS codes:

**09F4** | 4 years  
**H4H1** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng AERONAUTICS AND ASTRONAUTICS/ COMPUTATIONAL ENGINEERING AND DESIGN

You'll develop your knowledge of computational methods in aeronautics and astronautics. Your third and fourth years will provide you with the skills to solve new and emerging aerospace design challenges using advanced computational methods.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Introduction to Aircraft Design

Plus two additional module options

### Year four | Modules

- Group Design Project
- Advanced Management

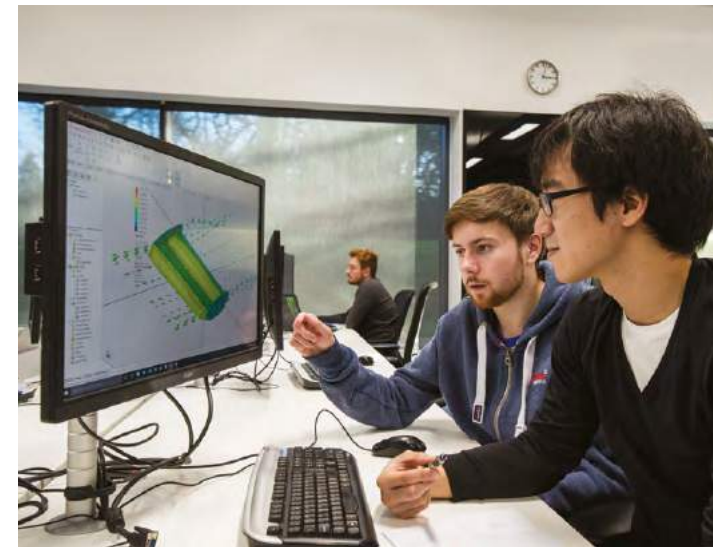
Plus three theme-specific module options from: Advanced Computational Methods I, Advanced FEA, Applications of CFD, Design Search and Optimisation, Systems Reliability, Numerical Methods, and Computational Methods in Biomedical Engineering Design

Plus one further module option, for instance Industrial Law and Human Factors Engineering

**For the full range of modules please visit the website**

# MEng AERONAUTICS AND ASTRONAUTICS/ ENGINEERING MANAGEMENT

You'll develop the technical skills to understand, design and manufacture innovative products, as well as the management expertise to take projects from initial concept to completion. In your third and fourth years, you'll learn about business strategy, finance, and managing people and projects.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Introduction to Aircraft Design

Plus two additional module options

### Year four | Modules

- Group Design Project
- Advanced Management

Plus three theme-specific modules from: Corporate Finance, Consultancy Skills, Strategic Management, Information Systems Management and Strategy, Operations Management, Project Management, Project Risk Management, FEA in Solid Mechanics, and Applications of CFD

Plus up to three further module options

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**HN42** | 4 years  
**HH44** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

## Key information

### UCAS codes:

**09F4** | 4 years  
**H4H1** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng AERONAUTICS AND ASTRONAUTICS/ COMPUTATIONAL ENGINEERING AND DESIGN

You'll develop your knowledge of computational methods in aeronautics and astronautics. Your third and fourth years will provide you with the skills to solve new and emerging aerospace design challenges using advanced computational methods.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Introduction to Aircraft Design

Plus two additional module options

### Year four | Modules

- Group Design Project
- Advanced Management

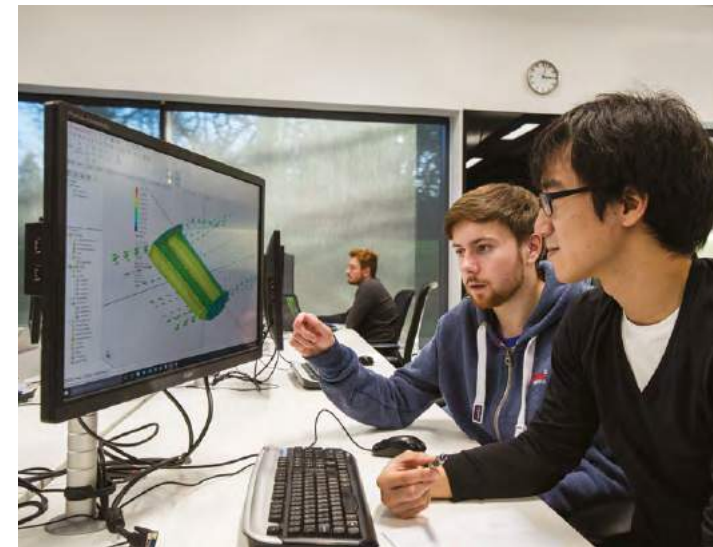
Plus three theme-specific module options from: Advanced Computational Methods I, Advanced FEA, Applications of CFD, Design Search and Optimisation, Systems Reliability, Numerical Methods, and Computational Methods in Biomedical Engineering Design

Plus one further module option, for instance Industrial Law and Human Factors Engineering

**For the full range of modules please visit the website**

# MEng AERONAUTICS AND ASTRONAUTICS/ ENGINEERING MANAGEMENT

You'll develop the technical skills to understand, design and manufacture innovative products, as well as the management expertise to take projects from initial concept to completion. In your third and fourth years, you'll learn about business strategy, finance, and managing people and projects.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Introduction to Aircraft Design

Plus two additional module options

### Year four | Modules

- Group Design Project
- Advanced Management

Plus three theme-specific modules from: Corporate Finance, Consultancy Skills, Strategic Management, Information Systems Management and Strategy, Operations Management, Project Management, Project Risk Management, FEA in Solid Mechanics, and Applications of CFD

Plus up to three further module options

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**HN42** | 4 years  
**HH44** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

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Or to have specific questions answered:

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**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



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Or to have specific questions answered:

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**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Key information

### UCAS codes:

**7T32** | 4 years  
**H44H** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

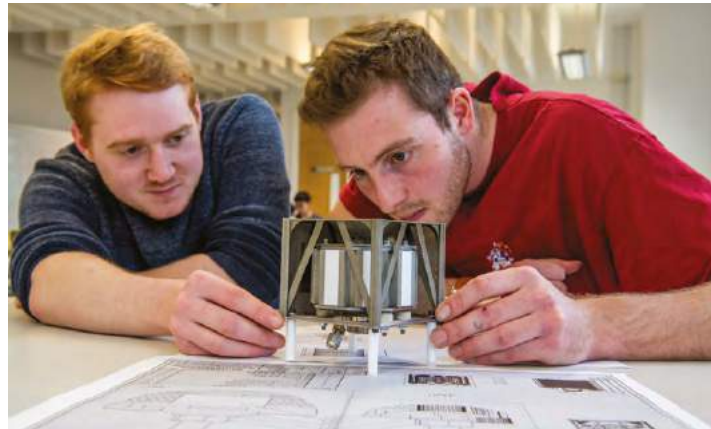
**Selection process:** UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng AERONAUTICS AND ASTRONAUTICS/MATERIALS AND STRUCTURES

Build your knowledge of structural design and materials selection for aerospace applications. In your third and fourth years you'll develop your understanding of how materials behave and your skills in the structural analysis of aircraft and spacecraft.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Introduction to Aircraft Design
- Finite Element Analysis in Solid Mechanics

Plus one additional module option

### Year four | Modules

- Group Design Project
  - Advanced Management
- Plus three theme-specific modules from: Advanced Finite Element Analysis, Aircraft Structures, Composites Engineering Design and Mechanics, Failure of Materials and Components, Manufacturing and Materials, Microstructural Engineering for Transport Applications, Microstructure and Surface Characterisation, and Spacecraft Structural Design

Plus one further module option, for instance Industrial Law and Human Factors in Engineering

**For the full range of modules please visit the website**

# MEng AERONAUTICS AND ASTRONAUTICS/SEMESTER ABROAD

You'll study abroad for a semester at one of our partner universities in France, Italy, Sweden, the Netherlands, or the USA. Your modules will differ depending on which semester you spend abroad and where you study.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

You can spend a semester abroad in either semester one or two. If you spend semester one abroad:

- In semester one:
- Semester Abroad
  - Aerospace Control Design
  - Aerothermodynamics
- In semester two:
- Aircraft Structural Design
  - Individual Project
  - Introduction to Aircraft Design

If you spend semester two abroad:

In semester one:

- Aerospace Control Design
- Aerothermodynamics
- Individual Project

In semester two:

- Semester Abroad
- Aircraft Structural Design
- Introduction to Aircraft Design

### Year four | Modules

- Group Design Project

Various module options are available, depending on the modules taken at the partner university, for instance Concurrent Spacecraft Design, Spacecraft Systems Engineering and Design, Applications of CFD, and FEA in Solid Materials

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**39C5** | 4 years  
**H44H** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer: **A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

**Selection process:** UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



I spent a semester on placement at ISAE-Supaero, in Toulouse, as part of my course. This was a fantastic opportunity to experience a new culture that brought with it a different approach to learning.”

**Chris Sheffer**  
MEng Aeronautics and Astronautics



## Find out more

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## Find out more

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Or to have specific questions answered:

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## Key information

### UCAS codes:

**H493** | 4 years

**H400** | 5 years with Industrial Placement Year

**Course director:** Dr Scott Walker

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** Our MEng courses are accredited by the Royal Aeronautical Society and the Institution of Mechanical Engineers, and provide a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng AERONAUTICS AND ASTRONAUTICS/SPACECRAFT ENGINEERING

You'll develop your knowledge of overall spacecraft system design, including subsystems and their interfaces. You'll learn to design, examine and test spacecraft systems and understand their environmental impact. When you graduate you'll be prepared for a career in the space industry.



## Course structure

### Year one | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year two | Modules

Refer to BEng Aeronautics and Astronautics on page 26 for modules

### Year three | Modules

- Advanced Astronautics
- Aerospace Control Design
- Aerothermodynamics
- Aircraft Structural Design
- Individual Project
- Spacecraft Systems Engineering and Design

Plus one theme-specific module option

### Year four | Modules

- Group Design Project
- Advanced Management
- Finite Element Analysis in Solid Mechanics

Plus two theme-specific module options from: Hypersonic and High Temperature Gas Dynamics, Spacecraft Instrumentation, Spacecraft Orbital Mechanics and Control, Spacecraft Propulsion, and Spacecraft Structural Design

Plus one further module option, for instance Industrial Law and Human Factors in Engineering

**For the full range of modules please visit the website**



A fourth-year student cleaning and reassembling the Antenna Deployment Mechanism on a CubeSat in the Integrated Photonics Cleanroom after thermal tests.



## Find out more

For more details about your course such as module information and course structure, visit

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# CHEMICAL ENGINEERING

## Choose Southampton

- Get hands-on experience in our state-of-the-art facilities including brand new chemistry laboratories
- Enjoy a rewarding career; chemical engineering is one of the most stable and lucrative employment sectors in the UK
- Take part in practical design modules, bringing together your theoretical knowledge and practical skills to create design solutions
- After you graduate, you could work in industries such as renewable energies, water and waste management, biotechnology, pharmaceuticals, mining oil and gas or the chemical and processing industries



Brand new  
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Enhance  
your employability  
with an optional  
**paid industrial  
placement year**



We're building bespoke chemical engineering laboratories which we're working towards being ready in 2022 - complete with a virtual control room

# BEng/MEng CHEMICAL ENGINEERING

Study a three-year BEng or four-year MEng. Draw on our expertise in low-carbon technology, fine chemicals, green energy and water/wastewater engineering, and gain the skills needed to improve the impact that chemical engineering has on the environment.



## Course structure

### Year one

Study the principles of chemical engineering, as well as modules in engineering and chemistry, covering topics including design mechanics and thermofluids.

### Year two

Deepen your knowledge of chemical engineering by studying more in-depth topics including process control, reaction engineering, and heat and mass transfer.

### Year three

Study advanced chemical engineering modules and take part in a challenging group design project to create a design solution - whether that's a simulation, a report to meet a brief or even building part of a chemical engineering plant.

### Year four (MEng)

You'll do an individual research project. You'll learn about the commercialisation of chemistry and choose optional modules in areas such as bioenergy, wastewater process engineering and artificial intelligence.

## Key information

### UCAS codes:

H800 | BEng | 3 years

H802 | BEng with Industrial

Placement Year | 4 years

H801 | MEng | 4 years

M803 | MEng with Industrial

Placement Year | 5 years

### Course director:

Dr Mohamed Hassan-Syed

**Start date:** September

### Selection process:

UCAS application.

Please contact our Enquiry

Team for more information

about this course

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/ug-chemeng](http://www.southampton.ac.uk/ug-chemeng)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

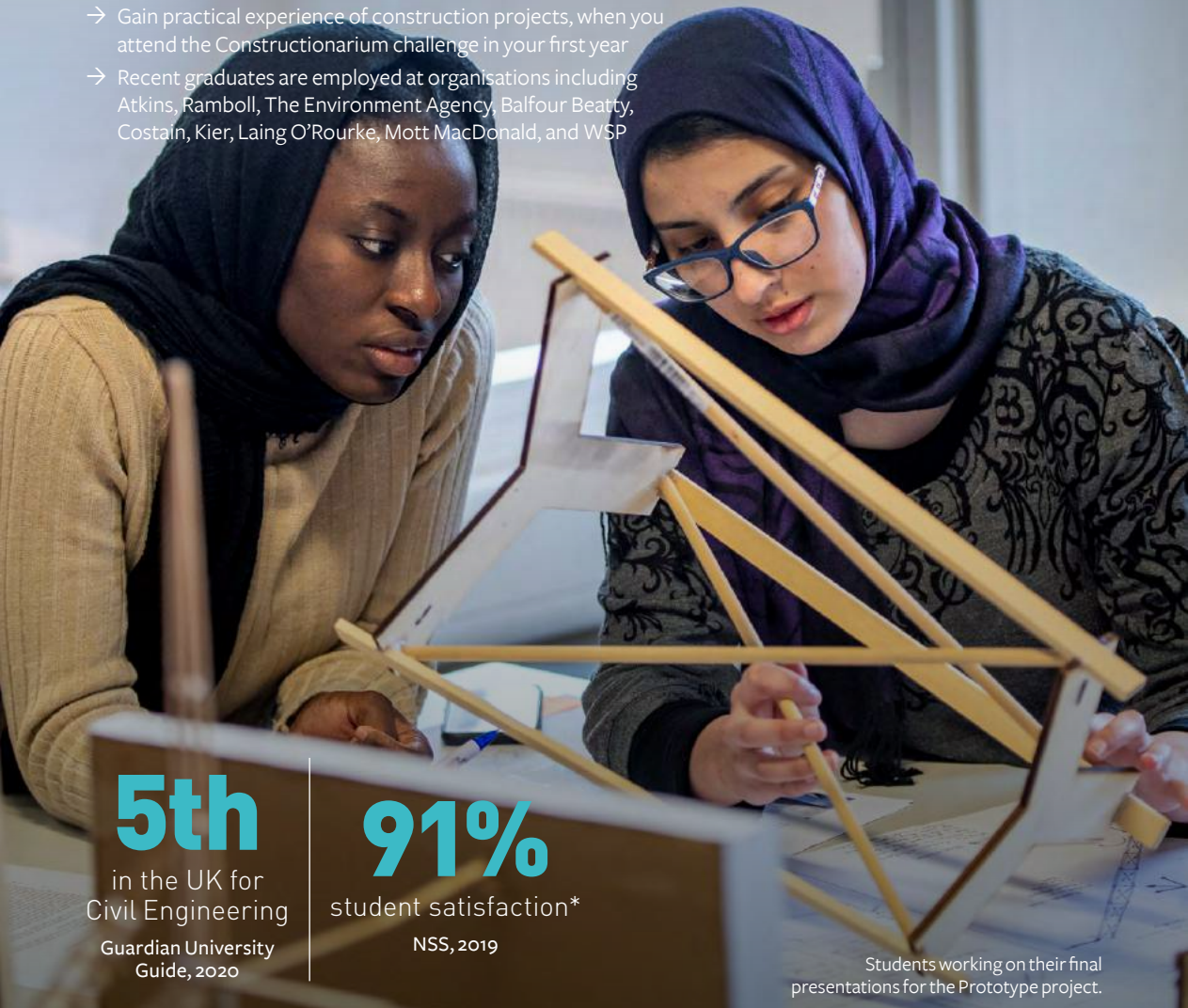
**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



# CIVIL ENGINEERING

## Choose Southampton

- Opportunities for work placements and annual bursaries with our SUCCESS Scholarship Scheme
- Take part in practical design modules throughout your degree, solving engineering challenges in a sustainable, ethical, human-centred and holistic way
- Gain practical experience of construction projects, when you attend the Constructionarium challenge in your first year
- Recent graduates are employed at organisations including Atkins, Ramboll, The Environment Agency, Balfour Beatty, Costain, Kier, Laing O'Rourke, Mott MacDonald, and WSP



**5th**  
in the UK for  
Civil Engineering  
Guardian University  
Guide, 2020

**91%**  
student satisfaction\*  
NSS, 2019

Students working on their final presentations for the Prototype project.

Civil engineering involves the planning, design, construction and maintenance of the built environment and infrastructure that are essential to the future development of our society. Encompassing a range of topics, including hydraulics, soil mechanics, structural design, and construction management, our courses will equip you with the skills to design creative solutions to engineering challenges.

## Course structure

Develop your understanding of the real-world application of mechanics, structures, materials, fluids, and construction management as you learn the essential principles of civil engineering.

## Subject highlights ✓

### SUCCESS

Enhance your employability with our SUCCESS scholarship scheme, which has been assisting students with work placements since 2003.

- Annual bursary of £1,650
- Summer work placements
- Industrial mentor
- Employment opportunities upon graduation

### ENGINEERING FACILITIES

You'll have access to our extensive facilities which include dedicated student design studios, a professional manufacturing centre and new hydraulics labs. You'll also benefit from our geotechnics laboratory and heavy structures facilities, which are housed in the new National Infrastructure Laboratory.

### ACCREDITATION

Our courses are fully accredited by the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation, and the Institute of Highway Engineers, and offer a route to chartered status.

You have flexibility in-built into your degree as the first two years are the same across all our Civil Engineering degrees.

You'll be able to choose your own pathway with our flexible programme structure. This will be particularly relevant from the third year onwards. You'll be able to focus on a specific area of civil engineering; such as structural engineering, transportation or water and environmental engineering. Or you'll have the option to maintain a broader perspective on general civil engineering.

### First year

Develop the design skills and processes needed for the creation of projects in the built environment and gain an understanding of the materials and structural forms used.

Learn to work in teams to build scaled down versions of famous structures, such as the Millau Viaduct, when you attend the week-long Constructionarium challenge.

### Second year

Participate in a team design project, such as designing a full-scale structure based on the requirements of a real site and a real client. You'll learn to take note of the local infrastructure and the impact of your project on the surrounding community.

### Third year

Personalise your degree to your future needs. Take a specialised path or retain a broad-based study path through your selection of modules and projects.

Bring together the concepts and skills you have learned in your individual project. Examples of individual projects undertaken by students include failure mechanisms in concrete floor slabs and an investigation into the erosion and retreat of coastal cliffs.

### Fourth year (MEng only)

Work as a team on your group design project. Projects are often linked to current research activities or sponsored by industry. Previous projects have included the design of a prototype vertical axis wind turbine to investigate renewable energy generation, and an investigation into the feasibility of an island-rising approach to protect the Maldives from increasing sea levels.

You'll also take advanced modules related to your chosen degree.

### Placements

Enhance your employability with a year-long paid placement in an engineering organisation and gain vital experience to prepare for your career (see page 12).

You can also gain work experience through our SUCCESS scholarship scheme.

➔ For more details about our courses visit:  
[www.southampton.ac.uk/civil-ug](http://www.southampton.ac.uk/civil-ug)



## Key information

### UCAS codes:

**H200** | 3 years  
**H20P** | 4 years with Industrial Placement Year

**Course director:** Professor William Powrie

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and an additional required subject†. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and an additional required subject† plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in an additional required subject

†Either physics, biology, chemistry, further mathematics, geography or geology. Pass in the associated science Practical is required where applicable

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (IStructE), the Chartered Institution of Highways and Transportation (CIHT), and the Institute of Highway Engineers (IHE), and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# BEng CIVIL ENGINEERING

Learn about structural mechanics, geotechnics, hydraulics, and construction management as you cover the key subjects of civil engineering. You'll be given opportunities to put theory into practice through laboratory sessions and design projects. You'll extend your knowledge through advanced modules, and carry out an individual research or design project in your final year.



Students on the first-year Constructionarium challenge.

## Course structure

### Year one | Modules

- Civil Engineering Fundamentals
- Design and Computing for Civil Engineers
- Mathematics
- Mechanics, Structures and Materials
- Thermofluids

### Year two | Modules

- Construction Management
- Design 2
- Hydraulics
- Mathematics
- Numerical Methods
- Soil Mechanics

→ Structural Analysis

→ Structural Design and Materials

### Year three | Modules

- Design 3
- Geotechnical Engineering
- Highway and Traffic Engineering
- Individual Project
- Structural Engineering

Plus module options including Environmental Hydraulics, Railway Engineering and Operations, Urban Design, and Urban Water and Wastewater Engineering

**For the full range of modules please visit the website**

# MEng CIVIL ENGINEERING

Study a more extensive range of advanced civil engineering subjects on this four-year integrated master's degree. You'll have the same comprehensive foundation as the BEng, as the first two years of our civil engineering degrees are identical. Taking part in individual and group projects in your third and fourth years will extend your knowledge and skills.



Second-year students doing a practical in the Hydraulic Flume.

## Course structure

### Year one | Modules

Refer to BEng Civil Engineering on page 40 for modules

### Year two | Modules

Refer to BEng Civil Engineering on page 40 for modules

### Year three | Modules

Refer to BEng Civil Engineering on page 40 for modules

### Year four | Modules

- Group Design Project
- Project Economics and Management

Plus module options including Coastal Engineering, Advanced Structural and Geotechnical Engineering, Earthquake Engineering, Bioenergy, Flood Modelling and Mitigation, Transport Modelling, and Waste Management

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**H201** | 4 years  
**HH20** | 5 years with Industrial Placement Year

**Course director:** Professor William Powrie

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and an additional required subject†. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and an additional required subject† plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in an additional required subject

†Either physics, biology, chemistry, further mathematics, geography or geology. Pass in the associated science Practical is required where applicable

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (IStructE), the Chartered Institution of Highways and Transportation (CIHT), and the Institute of Highway Engineers (IHE), and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/civil-ug](http://www.southampton.ac.uk/civil-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/civil-ug](http://www.southampton.ac.uk/civil-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Key information

### UCAS codes:

**HK21** | 4 years

**K21K** | 5 years with Industrial Placement Year

**Course lead:** Alastair McDonald

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and an additional required subject †.

Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and an additional required subject † plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in an additional required subject

† Either physics, biology, chemistry, geography or geology. Pass in the associated science Practical is required where applicable

### Selection process:

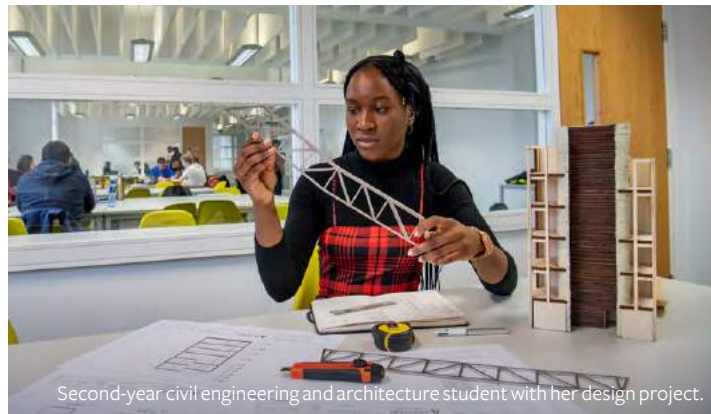
UCAS application

**Accreditation:** This course is accredited by the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (IStructE), the Chartered Institution of Highways and Transportation (CIHT), and the Institute of Highway Engineers (IHE), and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng CIVIL ENGINEERING AND ARCHITECTURE

Develop key design skills, and gain a solid understanding of civil engineering and architecture. This course is aimed at those who wish to pursue a career in structural engineering design. You'll focus on the design of structures, materials, construction processes, and their importance in developing sustainable urban environments.



Second-year civil engineering and architecture student with her design project.

## Course structure

### Year one | Modules

Refer to BEng Civil Engineering on page 40 for modules

### Year two | Modules

Refer to BEng Civil Engineering on page 40 for modules

### Year three | Modules

- Individual Project
- Architecture 3
- Geotechnical Engineering
- Structural Engineering
- Urban Design

### Year four | Modules

- Architectural Engineering Project
- Architectural Group Design Project
- Project Economics and Management

Plus module options including Architectural and Building Acoustics, Earthquake Engineering, Energy Performance Assessment of Buildings, and Advanced Foundation Engineering

**For the full range of modules please visit the website**



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/civil-ug](http://www.southampton.ac.uk/civil-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)

“

It's been exciting to work on my individual project this year. This is focused on methane production for use as biofuel. This varies from the typical courses I will do at undergraduate level but piques my interest as I want to be involved in work geared towards creating a sustainable future.”

**Dominique Ellis**

Civil Engineering, third year



Dominique working in the Fluids Laboratory, analysing the impact of a jet on a vane.



# MECHANICAL ENGINEERING

## Choose Southampton

- Get hands-on experience in our world-class facilities including our wind tunnel complex, used by Formula One and Olympic athletes
- Take part in practical design modules throughout your degree, solving engineering challenges in a sustainable, ethical, human-centred and holistic way
- After you graduate, you could join past students at organisations like Aston Martin Lagonda, Babcock, Dyson, ExxonMobil, Rolls-Royce, Siemens and Formula One teams
- We are a designated university for the Defence Technical Undergraduate Scheme, enabling you to receive military sponsorship



Take part in international competitions, including Formula Student and the Shell Eco-marathon

# 93%

in professional jobs or further study six months after graduation  
Latest DLHE, 2016/17

# No.8

in the UK  
Complete University Guide, 2020

Mechanical engineering involves the design, construction and operation of mechanical systems, and brings together creativity and design with mathematical and scientific principles. Mechanical engineers use their creative, technical and analytical skills to develop next-generation technologies across a broad range of industries.

## Course structure

### First and second year

You'll learn the essential principles of mechanical engineering, as well as law and management, systems design, and modelling and computing, in order to take a product from initial concept to the marketplace.

The first two years are the same across the BEng and MEng courses. In your first year you will develop your design and programming skills, preparing you to design, build and test engineering systems, components and mechanisms. You'll take part in a challenging design project in your second year, such as designing an autonomous robot or quadcopter.

### Third year

Your third-year modules will deepen your understanding of the relationship between design, manufacturing and materials' properties.

You'll also carry out an individual project, which brings together the concepts and skills you have learned. You're able to choose from a diverse range of projects that may involve theoretical work, simulation, design, and experimentation. Your project could focus on a range of topics, from studying orthopaedic biomechanics to electric vehicles.

### Fourth year

On a four-year MEng you can choose a broad-based degree, or one of 10 specialist themed degrees. You'll take

advanced modules and participate in master's-level group design project, applying your engineering knowledge to a design problem.

You can create your own project or choose from a range such as the design and development of a bladeless wind generator to produce renewable energy, a lower-limb exoskeleton for rehabilitation, or creating a Mars rover. Your project could be linked to our current research or supported by industry, for instance Airbus or Dyson.

### Placements

Enhance your employability with a year-long paid placement in an engineering organisation and gain vital experience to prepare for your career (see page 12).

## Subject highlights ✓

### ENGINEERING FACILITIES

You will have access to our extensive facilities which include student design studios and workshops, the largest wind tunnel in any UK university, our professional manufacturing centre, a high-resolution 3D imaging centre, and a materials and structures research facility in our new National Infrastructure Laboratory.

### ACCREDITATION

Our courses are fully accredited by the Institution of Mechanical Engineers and offer a route to chartered status.

### STRATEGIC PARTNERS

You can take advantage of opportunities for projects and placements due to our collaboration with Lloyd's Register at Boldwood Innovation Campus.



For more details about our courses visit:  
[www.southampton.ac.uk/mech-ug](http://www.southampton.ac.uk/mech-ug)



## Key information

### UCAS codes:

**H300** | 3 years  
**H30P** | 4 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# BEng MECHANICAL ENGINEERING

You'll cover the essential principles of mechanical engineering, including mechanics, structures and materials, design and computing. In your third year, you'll do an individual project and take advanced modules to suit your interests, from orthopaedic biomechanics to automobile systems.



## Course structure

### Year one | Modules

- Design and Computing
- Electrical and Electronic Systems
- Mathematics
- Mechanics, Structures and Materials
- Mechanical Systems Analysis
- Thermofluids

### Year two | Modules

- Electronics, Drives and Control
- Engineering Management and Law
- Fluid Mechanics
- Materials and Structures
- Mathematics

- Mechanics, Machines and Vibration
- Systems Design and Computing
- Thermodynamics

### Year three | Modules

- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Individual Project
- Manufacturing and Materials

Plus two module options, for instance Automobile Systems, Biomaterials, Robotic Systems and modern languages

**For the full range of modules please visit the website**

# MEng MECHANICAL ENGINEERING

You'll study advanced mechanical engineering subjects on this four-year integrated master's, with the ability to specialise your degree in years three and four. You'll also carry out a master's-level group design project.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Individual Project
- Manufacturing and Materials

Plus two module options, for instance Automotive Power Train and Chassis, Biomaterials, Human Factors in Engineering, Optimisation and Robotic Systems

### Year four | Modules

- Group Design Project
- Materials, Manufacturing and Supply Chain Management

Plus four module options, for instance Advanced Electrical Systems, Automotive Propulsion, Failure of Materials and Components, Sustainable Energy Systems, Resources and Usage and modern languages

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**H301** | 4 years  
**30HH** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

A levels: **A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer: **A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/mech-ug](http://www.southampton.ac.uk/mech-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Find out more

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[www.southampton.ac.uk/mech-ug](http://www.southampton.ac.uk/mech-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Key information

### UCAS codes:

**4R23** | 4 years  
**H34H** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

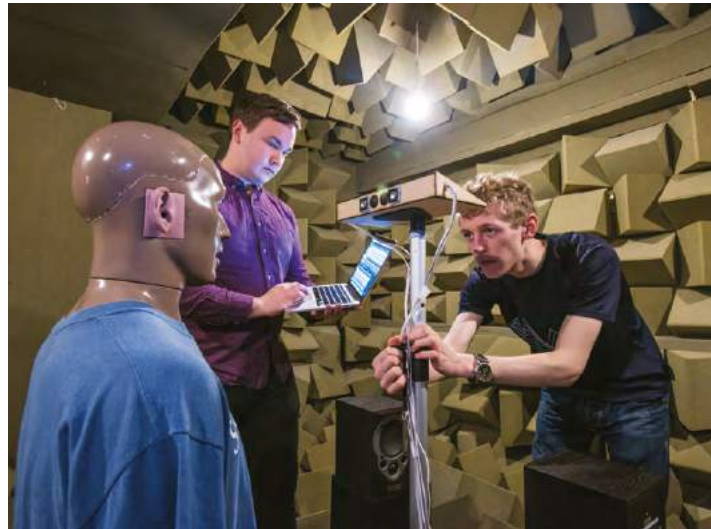
**Selection process:** UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng MECHANICAL ENGINEERING/ACOUSTICAL ENGINEERING

You'll develop the skills and knowledge to focus on the analysis, control and design of sound and vibration. You'll learn wide-ranging acoustical engineering skills, for instance to reduce jet engine noise, optimise the sound of automotive engines, or improve the accuracy of ultrasound scans.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Fundamentals of Acoustics
- Heat Transfer and Applications
- Individual Project
- Noise Control Engineering

Plus one module option, for instance Musical Instrument Acoustics, Human Responses to Sound and Vibration, and Sustainable Energy and Power Generation

### Year four | Modules

- Group Design Project
- Manufacturing and Materials
- Materials, Manufacturing and Supply Chain Management
- Signal Processing
- Vibration Engineering Practice

Plus one module option, for instance Aeroacoustics, Electroacoustics, Aircraft Propulsion and Advanced Computational Methods

**For the full range of modules please visit the website**

# MEng MECHANICAL ENGINEERING/AEROSPACE

You'll develop your expertise in aerospace systems, along with the core topics of mechanical engineering. During your third and fourth years, you'll specialise in aircraft aerodynamics, propulsion, avionics and structural design.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Individual Project
- Manufacturing and Materials
- Wing Aerodynamics

Plus one module option, for instance Aerothermodynamics, Fundamentals of Acoustics, Robotic Systems, and Materials in Transport

### Year four | Modules

- Aircraft Propulsion
- Applications of CFD
- Group Design Project
- Materials, Manufacturing and Supply Chain Management

Plus module options, for instance Aircraft Structures, Design Search and Optimisation, Hypersonic and High Temperature Gas Dynamics, and Systems Reliability

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**H344** | 4 years  
**H3H4** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

**Selection process:** UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/mech-ug](http://www.southampton.ac.uk/mech-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/mech-ug](http://www.southampton.ac.uk/mech-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Key information

### UCAS codes:

**H390** | 4 years

**H3H3** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng MECHANICAL ENGINEERING/AUTOMOTIVE

You'll explore a broad range of design and operational aspects related to automobile systems, from car structure and dynamics, to noise and vibration issues, and human factors. During your third and fourth years you'll develop the specialist skills and knowledge required for a career in the automotive industry.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Automotive Mechatronics
- Automotive Power Train and Chassis Systems
- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Individual Project
- Manufacturing and Materials

### Year four | Modules

- Advanced Electrical Systems
- Automotive Propulsion
- Group Design Project
- Materials, Manufacturing and Supply Chain Management

Plus two module options, for instance Tribological Engineering and Engine Tribology, Sustainable Energy Systems, Resources and Usage, and Principles of Photovoltaics, Fuel Cells and Batteries

**For the full range of modules please visit the website**

# MEng MECHANICAL ENGINEERING/BIOMEDICAL ENGINEERING

You'll blend engineering with biological and medical aspects of healthcare technologies, focusing on the mechanics of the human body, medical technologies and human factors in engineering. You'll learn to solve the challenges faced in the design, materials selection, development and testing of medical implants and other devices.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Biomaterials
- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Individual Project
- Manufacturing and Materials
- Orthopaedic Biomechanics

### Year four | Modules

- Biomedical Implants and Devices
- Computational Methods in Biomedical Engineering Design
- Group Design Project
- Introduction to Biomedical Technology
- Materials, Manufacturing and Supply Chain Management

Plus one module option, for instance Biomedical Spectroscopy and Imaging, Human Biology and Systems Physiology, Medical Electrical and Electronic Technology, and Translational Medicine

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**4R29** | 4 years

**H316** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/mech-ug](http://www.southampton.ac.uk/mech-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



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## Key information

### UCAS codes:

**5P01** | 4 years  
**H3H6** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels you will also receive the following offer: **A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

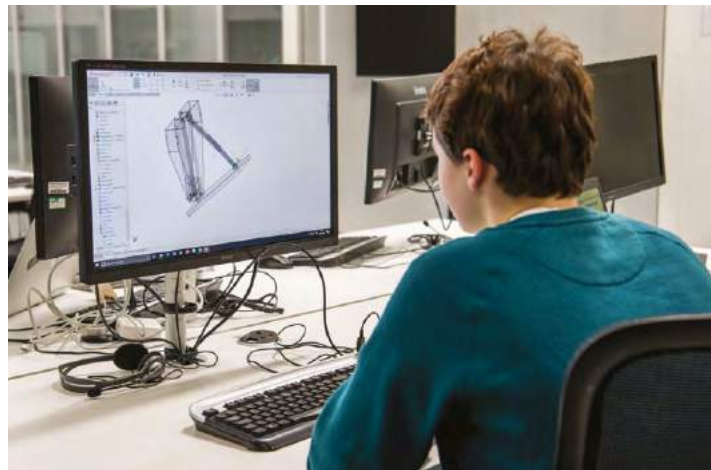
**Selection process:** UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng MECHANICAL ENGINEERING/ COMPUTATIONAL ENGINEERING AND DESIGN

You'll focus on developing the specialist skills you need to unlock the potential of today's immense computational power. You'll learn how to leverage sophisticated software to design complex technologies and how to code and implement your own models and simulations.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Advanced Partial Differential Equations
- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Individual Project
- Manufacturing and Materials

Plus one module option, for instance Biomaterials, Automotive Mechatronics, and Wing Aerodynamics

### Year four | Modules

- Advanced Computational Methods
- Design Search and Optimisation
- Group Design Project
- Materials, Manufacturing and Supply Chain Management

Plus two module options, for instance Advanced Finite Element Analysis, Applications of CFD, and Computational Methods in Biomedical Engineering Design

**For the full range of modules please visit the website**

# MEng MECHANICAL ENGINEERING/ ENGINEERING MANAGEMENT

You'll develop the technical skills to understand, design and manufacture innovative products. You'll also develop the management expertise to take projects from initial concept to completion. In your third and fourth years, you'll learn about business strategy, finance, and managing people and projects.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Accounting and Finance for Engineers
- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Human Factors in Engineering

- Individual Project
- Manufacturing and Materials

### Year four | Modules

- Consultancy Skills
- Group Design Project
- Materials, Manufacturing and Supply Chain Management
- Project Risk Management
- Strategic Management

Plus two module options, for instance Design Search and Optimisation, Composite Engineering Design and Mechanics, and Failure of Materials and Components

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**HN32** | 4 years  
**HH31** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer: **A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

**Selection process:** UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

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## Key information

### UCAS codes:

**HJ35** | 4 years  
**H3H1** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng MECHANICAL ENGINEERING/MATERIALS

You'll develop in-depth knowledge of the properties of established and novel materials that are essential in modern engineered systems. You'll study advanced topics such as the modelling of material behaviour and develop the skills to design materials and surfaces from atoms to applications.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Biomaterials
- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Individual Project
- Heat Transfer and Applications
- Manufacturing and Materials

### Year four | Modules

- Composites Engineering Design and Mechanics
- Failure of Materials and Components
- Group Design Project
- Materials, Manufacturing and Supply Chain Management

Plus two module options, for instance Advanced Finite Element Analysis, Design Search and Optimisation, Surface Engineering, and Microstructural Surface Characterisation

**For the full range of modules please visit the website**

# MEng MECHANICAL ENGINEERING/MECHATRONICS

You'll develop expertise in the integration of electrical and mechanical systems. You'll study and practise mechanical, electrical, and control engineering to develop smarter machines ranging from autonomous robots to self-driving cars.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Automotive Mechatronics
- Control and Instrumentation
- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer
- Individual Project
- Manufacturing and Materials

### Year four | Modules

- Advanced Electrical Systems
- Advanced Sensors and Condition Monitoring
- Group Design Project
- Materials, Manufacturing and Supply Chain Management

Plus two module options, for instance Advanced Computational Methods, Automotive Propulsion, Biomedical Implants and Devices, and Principles of Photovoltaics, Fuel Cells and Batteries

**For the full range of modules please visit the website**



## Find out more

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## Key information

### UCAS codes:

**HH37** | 4 years  
**H3H2** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

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Or to have specific questions answered:

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**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Key information

### UCAS codes:

**HH35** | 4 years  
**H3H5** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# MEng MECHANICAL ENGINEERING/NAVAL ENGINEERING

This course has been developed in conjunction with the Royal Navy. You'll study marine engineering, ship science and marine craft concept design, along with the key principles of mechanical engineering. You'll develop the skills to apply your knowledge to cutting-edge ship and maritime craft design.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Engineering Design with Management
- Fundamentals of Ship Science
- Heat Transfer and Applications
- Individual Project
- Marine Structures
- Maritime Safety: Risk, Environment and Law
- Manufacturing and Materials

### Year four | Modules

- Advanced Electrical Systems
  - Advanced Sensors and Condition Monitoring
  - Group Design Project
  - Marine Engineering
  - Materials, Manufacturing and Supply Chain Management
- Plus one module option, for instance Advanced Finite Element Analysis, Failure of Materials and Components, and Project Risk Management

**For the full range of modules please visit the website**

# MEng MECHANICAL ENGINEERING/SUSTAINABLE ENERGY SYSTEMS

You'll explore sustainable energy technologies such as wind turbines, solar cells, batteries and fuel cells, combined with a holistic view of societal aspects of energy, its distribution and use. In your third and fourth years, you'll study the behaviour of fluids, and thermal and heat transfer phenomena at an advanced level.



## Course structure

### Year one | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year two | Modules

Refer to BEng Mechanical Engineering on page 46 for modules

### Year three | Modules

- Control and Instrumentation
- Engineering Design with Management
- Finite Element Analysis in Solid Mechanics
- Heat Transfer and Applications
- Individual Project
- Manufacturing and Materials
- Sustainable Energy and Power Generation

### Year four | Modules

- Group Design Project
  - Materials, Manufacturing and Supply Chain Management
  - Principles of Photovoltaics, Fuel Cells and Batteries
  - Sustainable Energy Systems, Resources and Usage
- Plus two module options, for instance Advances in Photovoltaics, Fuel Cells and Batteries, Renewable Energy from Environmental Flows: Wind, Waves and Tide, Bioenergy, and Advanced Electrical Systems

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**HH32** | 4 years  
**H3J7** | 5 years with Industrial Placement Year

**Course director:** Professor Suleiman Sharkh

**Start date:** September

### Typical offers require

**A levels: A\*AA** including grades A\*A in mathematics and physics, with a pass in the physics Practical. Where an EPQ is taken in addition to three A levels, you will also receive the following offer:

**A\*AB** including grades A\*A in mathematics and physics, with a pass in physics Practical plus grade A in the EPQ

**IB:** Pass, with **38** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in physics

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Institution of Mechanical Engineers, and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

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# SHIP SCIENCE

## Choose Southampton

- Get hands-on experience in our state-of-the-art facilities including the largest university towing tank in the UK
- Take part in practical design modules throughout your degree, solving engineering challenges in a sustainable, ethical, human-centred and holistic way
- After you graduate, you could join past students at organisations like BAE Systems, BMT Group, Gurit, Lloyd's Register, Ministry of Defence, Princess Yachts, and Qinetiq



You'll learn from internationally-renowned engineers from the Wolfson Unit and Lloyd's Register

# 93%

are employed or in further study within 6 months of graduation

Latest DLHE, 2016/17

Ship science covers all aspects of maritime engineering, including the design, construction and testing of the vessels and offshore structures that use the ocean for transport, recreation and the harnessing of marine resources. Your degree is designed to support the aspirations of the UK's Maritime 2050 strategy.

## Course structure

### First and second year

You'll learn the core principles of naval architecture and develop a thorough understanding of the science and engineering associated with marine vehicles, structures and their design. The first two years are the same for both the BEng and MEng degrees.

In your first year you'll develop your design and programming skills, preparing you to design, build and test engineering systems, components, and mechanisms. You'll take part in a challenging design project in your second year, such as designing a range of ship system components with a number of interacting parts.

### Third year

In your third year, you'll carry out an individual project. Your project

could focus on range of topics, from investigating how to improve speed measurements for performance sailing yachts to the suitability of composite material for marine propellers. You'll also take part in a Marine Craft Concept Design challenge and present your design to industry professionals.

### Fourth year

If you choose the four-year MEng degree, at the end of year two you can choose one of six specialist pathways or maintain a broad-based degree:

- Advanced Computational Engineering
- Marine Engineering and Autonomy
- Naval Architecture
- International Naval Architecture
- Ocean Energy and Offshore Engineering
- Yacht and High Performance Craft

In your fourth year there is an emphasis on the commercial applications of your learning, and you'll take part in a master's-level group design project.

You can create your own project or choose from a range such as the design and development of a self-propelled sailing hydrofoil, an autonomous transatlantic vessel or a deep-sea robot for mapping. Your project could be linked to our current research or supported by industry, such as L3 ASV or BAE Systems.

### Placements

Enhance your employability with a year-long paid placement in an engineering organisation and gain vital experience to prepare for your career (see page 12). You can stand out in the workplace with other work experience opportunities including summer placements.

## Subject highlights ✓

### ENGINEERING FACILITIES

You will have access to our extensive facilities which include student design studios and workshops, a 138m towing tank with wave maker, wind tunnel complex and a professional manufacturing centre.

### ACCREDITATION

Our courses are fully accredited by the Royal Institution of Naval Architects, the Institution of Marine Engineering, Science and Technology, and the Institution of Mechanical Engineers, and offer a route to chartered status.

### INDUSTRY LINKS

Learn from engineers at our Wolfson Unit, a globally-respected marine design consultancy whose clients have included America's Cup teams. You'll also have opportunities for projects and placements due to our collaboration with Lloyd's Register at our Boldrewood Innovation Campus.



For more details about our courses visit:

[www.southampton.ac.uk/ship-ug](http://www.southampton.ac.uk/ship-ug)



## Key information

### UCAS codes:

**J640** | 3 years  
**J60P** | 4 years with Industrial Placement Year

**Course director:** Dr Stephen Boyd

**Start date:** September

### Typical offers require

**A levels: AAB** including grades AA mathematics and an additional required subject<sup>†</sup>. Where an EPQ is taken in addition to three A levels, you will also receive the following offer: **ABB** including mathematics (minimum grade A) and an additional required subject<sup>†</sup> plus grade A in the EPQ

**IB:** Pass, with **34** points overall with 17 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in chemistry or physics

<sup>†</sup>Either physics, chemistry or further mathematics. Pass in the associated science Practical is required where applicable.

### Selection process:

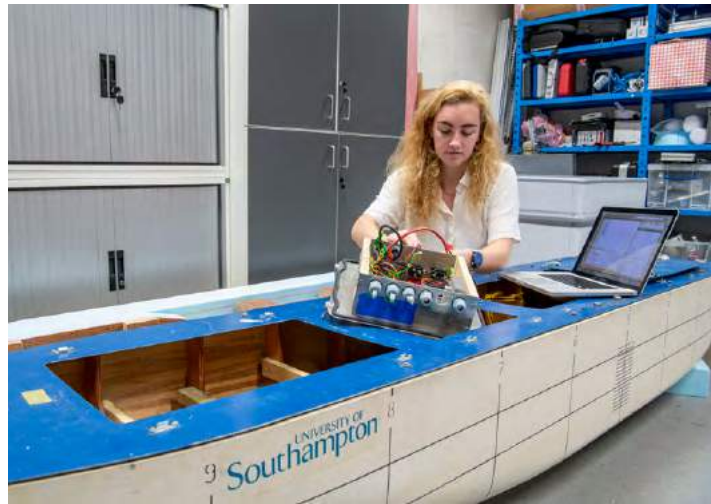
UCAS application

**Accreditation:** This course is accredited by the Royal Institution of Naval Architects (RINA), the Institution of Mechanical Engineers (IMechE) and the Institute of Marine Engineering, Science and Technology (IMarEST), and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements

# BEng SHIP SCIENCE

You'll learn the core subjects of naval architecture and marine engineering, and apply engineering science to the field of ships and other maritime structures. You'll study mechanics, hydrodynamics, seakeeping and ship design. In your third year you can study advanced naval architecture and carry out an individual research project.



## Course structure

### Year one | Modules

- Basic Naval Architecture
- Design and Computing
- Electrical and Electronic Systems
- Mathematics
- Mechanics, Structures and Materials
- Thermofluids

### Year two | Modules

- Engineering Management and Law
- Fluid Dynamics
- Materials and Structures
- Mathematics
- Ship Resistance and Propulsion
- Ship Design and Economics

- Ship Structural Design and Production
- Systems Design and Computing for Ships

### Year three | Modules

- Individual Project
- Marine Craft Concept Design
- Marine Engineering
- Marine Hydrodynamics
- Marine Structures
- Ship Manoeuvring and Control

Plus module options including Manufacturing and Materials, Accounting and Finance for Engineers, and Yacht and High Performance Craft

**For the full range of modules please visit the website**

# MEng SHIP SCIENCE

You'll learn the core principles of naval architecture and marine vehicles on this four-year integrated master's degree. At the end of year two, you can specialise through one of six pathways or maintain a broad-based degree.



## Course structure

### Year one | Modules

Refer to BEng Ship Science on page 60 for modules

### Year two | Modules

Refer to BEng Ship Science on page 60 for modules

### Year three | Modules

- Individual Project
- Marine Craft Concept Design
- Marine Engineering
- Marine Hydrodynamics
- Marine Structures
- Ship Manoeuvring and Control

Plus module options including Manufacturing and Materials, Accounting and Finance for Engineers, and Yacht and High Performance Craft

### Year four | Modules

- Group Design Project
- Design Search and Optimisation
- Project Risk Management
- Marine Safety: Risk, Environment and Law

Plus module options including Offshore Engineering and Analysis, Maritime Robotics, and Failure of Materials and Components

**For the full range of modules please visit the website**

## Key information

### UCAS codes:

**H52H** | 5 years with Industrial Placement Year

**Course director:** Dr Stephen Boyd

**Start date:** September

### Typical offers require

**A levels: AAA** including mathematics and an additional required subject<sup>†</sup>. Where an EPQ is taken in addition to three A levels, you will also receive the following offer: **AAB** including grades AA in mathematics and an additional required subject<sup>†</sup> plus grade A in the EPQ

**IB:** Pass, with **36** points overall with 18 points required at Higher Level, including 6 at Higher Level in mathematics: analysis and approaches or 7 at Higher Level in mathematics: applications and interpretation, and 6 at Higher Level in chemistry or physics

<sup>†</sup>Either physics, chemistry or further mathematics. Pass in the associated science Practical is required where applicable.

### Selection process:

UCAS application

**Accreditation:** This course is accredited by the Royal Institution of Naval Architects (RINA), the Institution of Mechanical Engineers (IMechE) and the Institute of Marine Engineering, Science and Technology (IMarEST), and offers a route to chartered status

Our typical entry requirements may be subject to change. Please refer to the website for language requirements



## Find out more

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# PATHWAY: ADVANCED COMPUTATIONAL ENGINEERING

Focus on computational techniques and their applications to the prediction of fluid and structure behaviour. You'll study the fluid interactions that are core to engineering in the maritime environment. You'll learn how to use these tools to analyse the design of large commercial ships and yachts and high-performance craft.



## Course structure

### Year one | Modules

Refer to BEng Ship Science on page 60 for modules

### Year two | Modules

Refer to BEng Ship Science on page 60 for modules

### Year three | Modules

- Individual Project
- Finite Element Analysis
- Marine Craft Concept Design
- Marine Engineering
- Marine Hydrodynamics
- Marine Structures
- Ship Manoeuvring and Control

### Year four | Modules

- Group Design Project
  - Applications of CFD
  - Design Search and Optimisation
  - Marine Structures in Fluids
  - Maritime Safety: Risk, Environment and Law
  - Offshore Engineering Analysis
- Plus module options including Marine Structures in Fluids, Maritime Robotics, Advanced Finite Element Analysis, and Renewable Energy from Environmental Flows: Wind, Wave and Tide

**For the full range of modules please visit the website**

# PATHWAY: MARINE ENGINEERING AND AUTONOMY

Focus on the analysis and specification of marine engineering and autonomous systems that are used on board ships and other marine structures. Increased environmental restrictions and the rising cost of traditional fuels has resulted in a variety of new technologies being adopted for monitoring and autonomy.



## Course structure

### Year one | Modules

Refer to BEng Ship Science on page 60 for modules

### Year two | Modules

Refer to BEng Ship Science on page 60 for modules

### Year three | Modules

- Individual Project
- Control and Instrumentation
- Marine Craft Concept Design
- Marine Engineering
- Marine Hydrodynamics
- Marine Structures
- Ship Manoeuvring and Control

### Year four | Modules

- Advanced Control Design
  - Advanced Sensors and Condition Monitoring
  - Group Design Project
  - Maritime Safety: Risk, Environment and Law
- Plus module options including Design Search and Optimisation, Failure of Materials and Components, Maritime Robotics, and Renewable Energy from Environmental Flows: Wind, Wave and Tide

**For the full range of modules please visit the website**



## Find out more

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# PATHWAY: NAVAL ARCHITECTURE

Specialise in core naval architecture topics and computational methods for the design of marine structures. This pathway is ideal if you have an interest in the design, manufacture and operation of commercial ships.



## Course structure

### Year one | Modules

Refer to BEng Ship Science on page 60 for modules

### Year two | Modules

Refer to BEng Ship Science on page 60 for modules

### Year three | Modules

- Individual Project
- Finite Element Analysis
- Marine Craft Concept Design
- Marine Engineering
- Marine Hydrodynamics
- Marine Structures
- Ship Manoeuvring and Control

### Year four | Modules

- Advances in Resistance and Propulsion
- Group Design Project
- Marine Structures in Fluids
- Maritime Safety: Risk, Environment and Law

Plus module options including Composite Engineering, Design and Mechanics, Renewable Energy from Environmental Flows: Wind, Wave and Tide, and Offshore Engineering and Analysis

**For the full range of modules please visit the website**

# PATHWAY: INTERNATIONAL NAVAL ARCHITECTURE

You can study abroad in the second semester of year three, whilst studying the Naval Architecture pathway. You can study at institutions including Webb Institute (USA), Norwegian University of Science and Technology (Norway) and KTH Royal Institute of Technology (Sweden).



## Course structure

### Year one | Modules

Refer to BEng Ship Science on page 60 for modules

### Year two | Modules

Refer to BEng Ship Science on page 60 for modules

### Year three | Modules

- Individual Project
- Marine Craft Concept Design
- Marine Engineering
- Semester Abroad
- Ship Manoeuvring and Control

### Year four | Modules

- Advances in Resistance and Propulsion
- Advanced Sensors and Condition Monitoring
- Group Design Project
- Marine Structures in Fluids

Plus module options including Design Search and Optimisation, Failure of Materials and Components, Maritime Robotics, and Offshore Engineering and Analysis

**For the full range of modules please visit the website**



## Find out more

For more details about your course such as module information and course structure, visit

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## Find out more

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**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



# PATHWAY: OCEAN ENERGY AND OFFSHORE ENGINEERING

Explore the search and use of sustainable energy sources from the ocean environment. This pathway is ideal if you are interested in the structural and hydrodynamic design analyses for fixed and floating offshore platforms.



## Course structure

### Year one | Modules

Refer to BEng Ship Science on page 60 for modules

### Year two | Modules

Refer to BEng Ship Science on page 60 for modules

### Year three | Modules

- Individual Project
- Manufacturing and Materials
- Marine Craft Concept Design
- Marine Engineering
- Marine Hydrodynamics
- Marine Structures
- Ship Manoeuvring and Control

### Year four | Modules

- Group Design Project
- Maritime Robotics
- Maritime Safety: Risk, Environment and Law
- Offshore Engineering and Analysis
- Renewable Energy from Environmental Flows: Wind, Wave and Tide

Plus module options including Applications of CFD, Design Search and Optimisation, Failure of Materials and Components, and Marine Structures in Fluids

**For the full range of modules please visit the website**

# PATHWAY: YACHT AND HIGH PERFORMANCE CRAFT

Specialise in the design, analysis and performance prediction of yachts, small craft and other high-performance vessels. You'll also develop your understanding of engineering materials used in their design and manufacture.



## Course structure

### Year one | Modules

Refer to BEng Ship Science on page 60 for modules

### Year two | Modules

Refer to BEng Ship Science on page 60 for modules

### Year three | Modules

- Individual Project
- Marine Craft Concept Design
- Marine Engineering
- Marine Hydrodynamics
- Marine Structures
- Ship Manoeuvring and Control
- Yacht and High Performance Craft

### Year four | Modules

- Advances in Resistance and Propulsion
- Composite Engineering, Design and Mechanics
- Group Design Project
- Maritime Safety: Risk, Environment and Law
- Sailing Yacht and Powercraft Design

Plus module options including Applications of CFD, Design Search and Optimisation, Marine Structures in Fluids, and Renewable Energy from Environmental Flows: Wind, Wave and Tide

**For the full range of modules please visit the website**



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/ship-ug](http://www.southampton.ac.uk/ship-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)



## Find out more

For more details about your course such as module information and course structure, visit

[www.southampton.ac.uk/ship-ug](http://www.southampton.ac.uk/ship-ug)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

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# FOUNDATION YEAR

The Foundation Year will equip you with the knowledge, skills and attributes needed to successfully meet the challenges of our degree courses. It is aimed at those who are highly motivated but who don't have the traditional qualifications of UK mathematics and physics A levels.

“ I really enjoyed the breadth of the Foundation Year and learning about the different engineering disciplines. It provided a strong foundation for the beginning of my degree and prepared me mentally for the transition.”

**Shinan Zhang**  
Engineering Foundation Year, 2016;  
MEng Civil Engineering and Architecture, fourth year

## Why take the Foundation Year?

This one-year full-time course is integrated with a further three-, four- or five-year undergraduate degree, and will build your understanding of mathematics, mechanics, computer programming, electricity and electronics, and engineering principles.

Successful completion of this Foundation Year guarantees progression to one of our 16 subject areas, including many of the engineering courses in this brochure.

## Who is it for?

This course may suit you if you:

- are studying A levels but not in the subjects usually required for entry to your chosen degree
- are a suitably experienced mature student
- are a capable student studying a BTEC National Extended Diploma, or other vocational award, who has not yet studied mathematics and physics to a sufficient depth for entry to our degrees
- have completed 11 or 12 years of education in your home country, rather than the 13 years typically completed in England and Wales.

## Course structure

You'll study full time through a combination of lectures, workshops, tutorials, and independent study, with three hours of laboratory practical work each week.

Whichever degree you're aiming for you'll take seven core modules:

- Electricity and Electronics
- Engineering Principles
- Coursework (including computer applications)
- Mathematics A
- Mathematics B
- Mechanical Science
- Routes to Success

\*MEng degrees with Industrial Placement Year are not available to students who require Tier 4 visas

International students with an overall IELTS score of between 5.5 and 6.5 will replace one of the seven modules above with English for Engineers and Scientists.

For information about the electronics and computer science, physics, mathematical sciences and geophysics degrees that you may progress to, please visit the website.

## Degree | UCAS code | Duration

### BEng Acoustical Engineering with Foundation Year

**H340** | 4 years

**H1BF** | 5 years with Industrial Placement Year

### MEng Acoustical Engineering with Foundation Year

**H016** | 5 years

**H1MF** | 6 years with Industrial Placement Year\*

### BEng Aeronautics and Astronautics with Foundation Year

**H420** | 4 years

**H2BF** | 5 years with Industrial Placement Year

### MEng Aeronautics and Astronautics with Foundation Year

**H410** | 5 years

**H2MF** | 6 years with Industrial Placement Year\*

### BEng Civil Engineering with Foundation Year

**H220** | 4 years

**H3BF** | 5 years with Industrial Placement Year

### MEng Civil Engineering with Foundation Year

**H413** | 5 years

**H3MF** | 6 years with Industrial Placement Year\*

### MEng Civil Engineering and Architecture with Foundation Year

**H2K1** | 5 years

## Key information

Typical offers require the following

**A levels:** ABB<sup>†</sup>

**IB:** 32 points<sup>†</sup>

**BTEC Level 3 National Extended Diploma (RQF):** DDD<sup>†</sup>

<sup>†</sup>Subject restrictions apply

**Selection process:**

UCAS application; additional information may be required, such as a mathematics test and/or interview

Our typical entry requirements may be subject to change. Please refer to the website for language requirements and details of subject restrictions

### BEng Mechanical Engineering with Foundation Year

**H421** | 4 years

**H4BF** | 5 years with Industrial Placement Year

### MEng Mechanical Engineering with Foundation Year

**J512** | 5 years

**H4MF** | 6 years with Industrial Placement Year\*

### BEng Ship Science with Foundation Year

**H518** | 4 years

**H5BF** | 5 years with Industrial Placement Year

### MEng Ship Science with Foundation Year

**H510** | 5 years

**H5MF** | 6 years with Industrial Placement Year\*

➤ For more details about our courses visit:  
[www.southampton.ac.uk/efy](http://www.southampton.ac.uk/efy)



# YOUR CAREER

**Your future doesn't start when you graduate; it begins the moment you join us at Southampton.**

Benefit from Future Worlds, our on-campus startup accelerator. A group of engineering students founded Cluttr, after pitching it at the Future Worlds Dragons' Den event, and now they have taken their place among the world's best startups in Silicon Valley.

## Fast track your ambitions

- Whether you have a plan in mind, or you are unsure about where life may take you, our Careers and Employability Service can guide and support you at every stage.
- Our strong links with business and highly valued reputation in industry means that we provide numerous opportunities to help you discover and realise your potential.
- Take advantage of work placements, internships and voluntary roles, and attend our careers fairs, one-to-one advice sessions, and employer-led events.
- We offer Career Coaching to first-generation students, and the chance for under-represented students to improve social mobility through our Advance Programme.
- We have everything you need to achieve your entrepreneurial goals: make the most of available funding, attend workshops and summer schools and access our extensive expertise.

## Showcase your potential

- Take advantage of our commercial partnerships through work placements, internships and volunteering.
- Benefit from advice from graduates about future career possibilities through alumni career panel events.
- We can develop your enterprising mindset and entrepreneurial skills if you want to build your own business or help solve social problems.
- Specialise further with one of our postgraduate courses and gain a more in-depth knowledge of your subject to realise your ambitions.
- Connect with a mentor to support your transition from university into work through our Career Mentoring Programme.

**Southampton graduates are successfully employed at high-profile organisations such as:**

Airbus  
Arup  
Atkins  
BAE Systems  
Bentley Motors  
Dolby  
Dstl  
Dyson  
European Space Agency  
Jaguar Land Rover  
Kier  
Laing O'Rourke  
McLaren Racing  
Mercedes-AMG Petronas  
Formula One  
Princess Yachts  
Ramboll  
Rolls-Royce  
Siemens  
Surrey Satellite Technology

We are among the

**top 20**

UK universities targeted by the largest number of **top 100** graduate recruiters\*

**882**  
work experience opportunities

**130+**  
employer-led events and workshops on campus

Our career practitioners provide **1:1** careers advice

“

What I wasn't expecting was all the support that exists for developing a startup at the University, so a degree really is a great time to start. Future Worlds gave me the encouragement and support to believe that I could launch my own business.”

**Joshua Steer**

BEng Mechanical Engineering, 2015;  
PhD Biomedical Engineering, 2019;  
Founder, Radii Devices



Joshua's spinout company, Radii Devices, is easing the process of forming well-fitting prosthetics, which currently requires an average of nine clinical visits due to an absence of analytical tools. His software will save health professionals valuable time while increasing the quality of life for amputees.

➔ **Find out more:**  
[www.southampton.ac.uk/sb/careers](http://www.southampton.ac.uk/sb/careers)



# YOUR STUDENT LIFE



Your time at Southampton will make your degree a lot more than just a qualification.

01

## Campuses

We have five campuses in Southampton, one in Winchester and one in Malaysia. Each has its own distinct personality and community.

Highfield is our main campus; it is home to historic buildings, cutting-edge research and teaching facilities, and the Students' Union, as well as our beautiful green spaces. Highfield is a hub of activity and the perfect place to study, relax, and socialise.



**uni\_southampton**  
**southampton\_engineering**  
Follow us on Instagram to see more pictures of our campuses

Just a few minutes' walk from Highfield, and on the edge of Southampton Common, Avenue Campus is where you'll find most of our humanities subjects. Avenue houses our state-of-the-art £3m Archaeology building.

Boldrewood Innovation Campus is the base for engineering studies and research. Facilities include a driving simulator, design studios, a 138m towing tank and our £48m National Infrastructure Laboratory.

One of the UK's leading teaching hospital trusts, University Hospital Southampton NHS Foundation Trust is the base for the study of medicine and healthcare.



02

Our unique waterfront campus, based at the National Oceanography Centre Southampton (NOCS), is one of the world's leading research centres for the study of ocean and Earth science.

Winchester School of Art (WSA) is located 12 miles north of Southampton, in Winchester city centre. With creative ambition at its core, WSA supports students with cutting-edge resources including specialist computer suites, studios, 3D printing, industrial sewing and knitting machines, and more.

Set within the EduCity Iskandar development in Johor, Southampton Malaysia offers split degrees in several undergraduate Engineering programmes. Students benefit from our world-class teaching and course content in a safe and supportive international environment with excellent facilities.

## Social life

Run for students by students, the Students' Union aims to unlock the potential and enrich the life of every student. Its main purpose is to look after the academic interests of all students, through their representation system, elections and Advice Centre.

- Experience Freshers' – a full programme of activities to help you settle in.
- Join one of more than 300 clubs and societies, and try everything from archery and performing arts to debating and quidditch.
- Volunteer your time with RAG (Raise and Give), a student group that organises fundraising events to benefit local, national and international charities.
- Enjoy food from a Michelin-trained chef at student prices in The Bridge, try delicious vegan and vegetarian food in The Plant Pot, or socialise with friends in The Stag's sports bar.
- Catch a film in the Union's 260-seat cinema, run by student volunteers.
- Dance the night away in the Union's venues for large events, such as gigs and student balls.
- Become a DJ or station manager at Surge Radio and SUSUtv.
- Try out journalism with one of the Union's award-winning magazines, *Wessex Scene* or *The Edge*.



03

04



05

- Get free, independent and confidential advice from the Advice Centre on matters including student finance, housing and academic issues.
- Run for one of the positions in the Students' Union's elections and become the voice of students across the University.

## Sport

- Swim in our six-lane, 25-metre pool or use the varied fitness equipment across our nine gyms: six on campus and three more in the city.
- Compete on over 20 grass and synthetic pitches or use our martial arts studio or indoor climbing wall.
- Your subsidised Sport and Wellbeing membership gives you access to a host of facilities and activities across the city including a dry ski slope, athletics track, and free watersports.
- Join one of the student sport teams or Athletic Union clubs.

- 01 Socialising at bars and restaurants.
- 02 Make the most of our sports facilities and opportunities.
- 03 An evening out at Hollywood Bowl.
- 04 Students performing at live music events.
- 05 Westquay shopping centre.

➔ **Find out more:**  
[www.southampton.ac.uk/sb/life](http://www.southampton.ac.uk/sb/life)



# ACCOMMODATION

Welcome to your home from home. Our accommodation is the ideal place to make new friends, experience student life, grow your confidence, and learn to be independent.

All of our halls provide excellent facilities, a guaranteed offer of accommodation\* in your first year at the University, and 24-hour support and advice.

Enjoy living in great locations in Southampton, with easy access to our campuses and facilities. Some are within walking distance of Highfield Campus, while others are closer to the vibrant city centre.

You can choose from a range of room types, including en suite or non-en suite, and catered or self-catered.

We also have rooms to suit all needs, including accessible adapted rooms, couple and family accommodation, and spaces specifically for mature undergraduate and postgraduate students.

## How to apply

You can apply for your accommodation when applications have opened and you have received your formal offer of study with your student identification number (the eight-digit number given to you by the University).

Find out more and apply on our website.

## Just some of the benefits of living in halls include:

- a friendly student community and competitive prices (which include utility bills, internet, contents insurance and, for halls in Southampton, a Unilink bus pass)
- great transport links with our campuses
- on-site facilities including common rooms, launderettes, study and social spaces
- year-round, 24-hour support from our Student Life team
- 24-hour security and CCTV on all sites
- catered and self-catered options

## \*Our guarantee to you

If you are a registered first-year undergraduate student, new to the University, starting a full-time course, with no dependants, you will be guaranteed an offer of halls accommodation as long as you fulfil the full criteria of the guarantee, which includes applying before 1 August.

To uphold the guarantee, in years of exceptional demand, we may offer accommodation in a twin shared room at the start of the academic year for a short period of time. You also have the opportunity to apply for continuing years in halls.

Although this cannot be guaranteed, we will always offer students accommodation if we have availability.



Stay in one of over **6,400** student rooms

- 01 Work or relax in communal spaces.
- 02 Spacious accommodation at Mayflower Halls.
- 03 There are plenty of communal areas in halls.
- 04 Outside space at Glen Eyre.



**FEBRUARY/  
MARCH 2021**  
Accommodation application opens and goes live online

**JUNE/JULY 2021**  
Allocation and offer of rooms starts for deferred students and students with unconditional offers, who have applied for accommodation before 31 May 2021

**1 AUGUST 2021**  
New students must have applied for accommodation before this date to be eligible for our accommodation guarantee

**MID SEPTEMBER 2021**  
Allocation of rooms completed

**APPLICATION TIMELINE**

**MID AUGUST 2021**  
After A level results, allocation of rooms to all students begins

**25-26 SEPTEMBER 2021**  
Arrivals weekend

▶ Watch our video 'Accommodation – your home away from home' at [www.southampton.ac.uk/sb/lifeinhalls](http://www.southampton.ac.uk/sb/lifeinhalls)

➤ Find out more: [www.southampton.ac.uk/sb/accommodation](http://www.southampton.ac.uk/sb/accommodation)



# APPLYING AND FUNDING



## How and when to apply

- Applications should be submitted via UCAS ([www.ucas.com](http://www.ucas.com)).
- Our institution code is S27 and our code name is SOTON.
- The applications open in early September.
- The equal consideration date for all other programmes is 15 January. (Please note that this does not apply to international applicants.)
- The deadline for applications is 30 June, although we strongly advise you to apply as early as possible as some courses may no longer have vacancies after the January equal consideration date.

## Tuition fees and funding

The University will set fees for 2021/22 subject to any conditions imposed by government. Currently the tuition fee is £9,250\*, but we offer a large number of generous fee waivers and bursaries for eligible students. For students from lower income families, these financial packages will be based on household income supplied to us by the Student Loans Company.

If you are funding your own studies, you will need to pay your fees in advance, or you can choose to pay your fees in three instalments on the first day of each term to help spread the cost across the year.

Visit our website for the latest information on tuition fees before you submit your UCAS form for entry in the 2021/22 academic year. Students who have applied for a deferred place in 2020/21 will be eligible for the 2021/22 tuition fees and support.

If you are a UK student starting a higher education course in 2021/22, you can apply for loans to help pay for both fees and living costs. For more details, visit [www.southampton.ac.uk/sb/fees](http://www.southampton.ac.uk/sb/fees)

## EU student fees

At the time of print the UK government has not confirmed whether students from the EU will be eligible for UK or international fees. Up-to-date information about fees can be found on our website.

## Channel Islands/ Isle of Man student fees

Channel Islands and Isle of Man students will be charged the same tuition fee as UK students.

## International student fees for 2021/2022

All programmes in Engineering and Physical Sciences: **£22,760 per year**  
Foundation Year: **£19,500 per year**

## International student fixed fees

International students commencing their programme of study in 2021 will pay the same fixed fee for each year of their programme, with the exception of programmes where a combination of clinical and nonclinical fees apply. In these instances, the non-clinical fixed fee will apply for years one and two, and the clinical fixed fee will apply for the remainder of the programme. As with other UK medical courses, these fees may be subject to an additional charge for clinical placement in the NHS, decided by the UK Government. Students commencing a Foundation Year will pay less for their Foundation Year than for the rest of their integrated degree.

## Scholarships and bursaries

We offer a variety of scholarships and progression awards to the most talented students across our subject areas.

We also offer a range of bursaries designed to help UK undergraduate students in the most financial need.\*\*

## EPQ


Our research-led approach to learning is reinforced in the value we place on an Extended Project Qualification.

As the first university to formally recognise the EPQ in its admissions offer scheme, we have always recognised that skills gathered through independent project work and research will enhance and prepare you for your university experience.

Equivalent to half an A level, an EPQ requires students to complete a self-directed and self-motivated project on a topic of their choice.

On most of our courses applicants offering an EPQ will be made two offers – our typical offer based on three A levels, and an alternative where, in exchange for an A or A\* in the EPQ, we will reduce the A level requirements by one grade. For example, a typical offer of AAA would be made alongside an offer of AAB, plus an A in the EPQ.

We also provide free online support on developing EPQ research projects.

 **Find out more:**  
[www.southampton.ac.uk/sb/fees](http://www.southampton.ac.uk/sb/fees)



# HOW TO FIND US

Our city is well connected, making it easy to explore your new home. We are proud to be accessible from wherever you are in the world; you are never too far from Southampton.



## University of Southampton

University Road, Southampton SO17 1BJ, UK

T: +44 (0)23 8059 5000

[www.southampton.ac.uk](http://www.southampton.ac.uk)

# TERMS AND CONDITIONS

The University's Charter, statutes, regulations and policies are set out in the University Calendar and can be accessed online at [www.calendar.soton.ac.uk](http://www.calendar.soton.ac.uk)

## Terms of use

This prospectus does not constitute an offer or invitation by the University of Southampton to study at Southampton. It provides an overview of the University and life at Southampton, along with information about all the undergraduate programmes available at the time of publication. This is provided for information purposes only. Applications made to the University should be made based on the latest programme information made available by the University. Relevant weblinks are shown throughout. Please also consult the programme information online for further details or for any changes that have appeared since first publication of the prospectus.

The information contained in the prospectus, welcome guides or on our websites is subject to change and may be updated by the University from time to time to reflect intellectual advances in the subject, changing requirements of professional bodies and changes in academic staff members' interests and expertise. Changes may also occur as a result of monitoring and review by the University, external agencies or regulators.

## Programme Validation

Validation is the process by which the University approves its programmes of study. Any taught undergraduate and postgraduate programme leading to a University of Southampton award, including research degrees with a taught component (eg Engineering Doctorate) are required to go through Programme Validation. The full validation process can be found in the University's Quality Handbook: [www.southampton.ac.uk/quality](http://www.southampton.ac.uk/quality)

## 1. Change or discontinuance of programmes

The University of Southampton will use all reasonable efforts to deliver advertised programmes and other services and facilities in accordance with the descriptions set out in the prospectuses, student handbooks, welcome guides and website. It will provide students with the tuition and learning support and other services and facilities so described with reasonable care and skill. We undertake a continuous review of our programmes, services and facilities to ensure quality enhancement. We are largely funded through public and charitable means and are required to manage these funds in an efficient and cost-effective way for the benefit of the whole of the University community. We therefore, reserve the right where necessary to:

- alter the timetable, location, number of classes, content or method of delivery of programmes of study and/or examination processes, provided such alterations are reasonable
- make reasonable variations to the content and syllabus of programmes of study (including in relation to placements);
- suspend or discontinue programmes of study (for example, because a key member of staff is unwell or leaves the University)
- make changes to our statutes, ordinances, regulations, policies and procedures which we reasonably consider necessary (for example, in the light of changes in the law or the requirements of the University's regulators). Such changes if significant will normally come into force at the beginning of the following academic year or, if fundamental to the programme, will normally come into force with effect from the next cohort of students
- close programmes of study or to combine or merge them with others (for example, because too few students apply to join the programme for it to be viable)



Find out more:  
[www.southampton.ac.uk/sb/campuses](http://www.southampton.ac.uk/sb/campuses)

However, any revision will be balanced against the requirement that students should receive the educational service expected. The University's procedures for dealing with programme changes and closures can be found in our Quality Handbook at [www.southampton.ac.uk/quality](http://www.southampton.ac.uk/quality)

If the University closes, discontinues or combines a programme of study or otherwise changes a programme of study significantly (the 'Change'), the University will inform applicants (or students where relevant) affected by the Change at the earliest possible opportunity.

- a. If the Change comes into force **before** the University has made an **offer** of a place or before an applicant has accepted an offer of a place, an applicant will be entitled to withdraw his or her application, without any liability to the University, by informing the University in writing within a reasonable time of being notified of the Change.
- b. If the Change comes into force **after** an offer has been accepted but prior to the student **enrolling**, the student may either:
  - i) withdraw from the University and be given an appropriate refund of tuition fees and deposits, or
  - ii) transfer to another available programme (if any) as may be offered by the University for which the student is qualified

If in these circumstances the student wishes to withdraw from the University and to apply for a programme at a different university, the University shall use its reasonable endeavours to assist the student.

- c. If the Change comes into force **after** a student has **enrolled**, the University will use reasonable endeavours to teach the programme out but cannot guarantee to do so. If the University cannot teach out a programme of study, it will use its reasonable endeavours to facilitate the transfer of a student to an equivalent programme for which the student is qualified and which has places available within the University or at a different university. Any revision will be balanced against the requirement that students should receive the educational service expected.

All changes will be managed in line with our Student Protection Plan.

## 2. Changes to services or facilities

The University will make available to students such learning support and other services and facilities as it considers appropriate, but may vary what it provides from time to time (for example, the University may consider it desirable to change the way it provides library or IT support).

## 3. Financial or other losses

The University will not be held liable for any direct or indirect financial or other losses or damage arising from such closures, discontinuations, changes to or mergers of any programme of study, service or facility. Upon acceptance by an applicant of an offer of a place at the University, the relationship between the applicant and the University becomes contractual. When the contract is formed between the student and the University it will last for the relevant academic year only unless the student withdraws from the programme or the programme is terminated.

Please note: the right of a student to withdraw from a programme of study under the provisions set out in paragraph 1b. above following a Change are in addition to any statutory rights of cancellation that may exist under the Consumer Contracts (Information, Cancellation and Additional Charges) Regulations 2013. In entering into that contract, the terms of the contract will not be

enforceable by any person not a party to that contract under the Contracts (Rights of Third Parties) Act 1999.

## Student Protection Plan

As a registered provider of higher education with the Office for Students, we have a Student Protection Plan (SPP) in place, which sets out what students can expect to happen should a course or campus close. The purpose of this plan is to ensure that students can continue and complete their studies, or can be compensated if this is not possible.

Full details of the plan can be found at [www.southampton.ac.uk/protection-plan](http://www.southampton.ac.uk/protection-plan)

## Force majeure

The University will not be held liable for any loss, damage or expense resulting from any delay, variation or failure in the provision of programmes of study, services or facilities arising from circumstances beyond the University's reasonable control, including (but not limited to) war or threat of war, riot, civil strife, terrorist activity, industrial dispute, natural or nuclear disaster, adverse weather conditions, interruption in power supplies or other services for any reason, fire, boycott and telecommunications failure. In the event that such circumstances beyond the reasonable control of the University arise, it will use all reasonable endeavours to minimise disruption as far as it is practical to do so provided that such endeavours do not undermine the University's Quality Assurance requirements.

## Admissions Policy and complaints

The University will assess applications in line with its then current Admissions Policy. This policy is reviewed at least annually. The Admissions Policy, current at the time of publication, is published online and is available at [www.calendar.soton.ac.uk/sectionIV/admissions.html](http://www.calendar.soton.ac.uk/sectionIV/admissions.html)

Before you apply please see subject websites listed for subject-specific terms and conditions.

Applicants may raise complaints related to admissions under the University's Regulations Governing Complaints from Applicants, which can be found at [www.calendar.soton.ac.uk/sectionIV/admissions.html](http://www.calendar.soton.ac.uk/sectionIV/admissions.html)

Further information about or clarification of these procedures is available from the Admissions team, Student and Academic Administration, University of Southampton, Southampton SO17 1BJ; [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)

## Data protection

During the application procedure, the University will be provided with personal information relating to the applicant. An applicant's personal data will be held and processed by the University in accordance with the requirements of the Data Protection Act 2018.

Please also see our Privacy Notice for Applicants at [www.southampton.ac.uk/about/governance/policies/privacy-notice-applicant-page](http://www.southampton.ac.uk/about/governance/policies/privacy-notice-applicant-page)

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A copy of this prospectus and the University's current information for students with disabilities and specific learning difficulties can be made available, on request, in alternative formats, such as electronic, large print, Braille or audio, and, in some cases, other languages.

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