Find out more: www.southampton.ac.uk/ecs

UK enquiries: enquiry@southampton.ac.uk +44 (0)23 8059 9699

EU and International enquiries: International@southampton.ac.uk +44 (0)23 8059 9699



Southampton

CREATE TOMORROW'S TECHNOLOGIES

ELECTRONICS AND COMPUTER SCIENC UNDERGRADUATE COURSES 2021

RUSSELL GROUP

SUPPORTING YOU WITH OUR SCHOLARSHIP PROGRAMME

Scholarships are available in a variety of categories. They are valued at up to £3,000 each. Full information is available on our website.

www.ecs.soton.ac.uk/scholarships

Find out more:



Top 20

UK university**

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 i a friendly and vibrant community.

Our academics and diverse student community wil nspire, challenge and support you. Together we can help you make your mark on the world. Electronics and Computer Science (ECS) at the University of Southampton has been changing the world since its foundation and continues to do so. It is one of the world's largest and most successful departments of its kind, with over 70 years of technology development at the leading edge. You will benefit from our superb undergraduate facilities and our internationally renowned teaching and research programmes that are ranked among the best in the UK.

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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/virtualopenda

*QS World University Rankings, 202 **Complete University Guide, 202

A GLOBAL UNIVERSITY



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.



@unisouthampton









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.

Jemma Watson MEng Electronic Engineering, 2019 Hardware Engineer, Sky

"The laboratories and facilities ECS students ge to use are amazing. It's cool that you use such a wide range of state-of-the-art equipment every day, both for lab work and personal projects. In the electronic project lab areas, people work together on coursework and sharing ideas, which creates a really nice working environment.

I loved the variety that an engineering degree offers. You can choose the modules that interest you and specialise as much or little as you like."



Alice Brooks

MEng Electronic Engineering, 2018 Validation Engineer, JEB Technologies

'I recommend Southampton as a place to study because it has a great balance between academic study and social life. The practical work I did here really set me up for working in the real world, and employers love Southampton graduates because of their practical skills.

At JEB Technologies I get to work on lots of different medical devices, which was one of my ambitions throughout my university career. In this ble to use my electronics skills in software opment, rapid prototyping, and microntroller programming."

ultra

Ricki Tura

MEng Electronic and Electrical Engineering with Industrial Studies, final year

"The greatest achievement of my student career wa winning the 2018 UKESF Scholar of the Year Award at the TechWorks Awards Ceremony. I learnt a lot of "real world" skills through my scholarship, particula the logistics involved with relocating to a new area each summer to take part in summer internships I also learnt a lot of technical skills. During my internships with UltraSoC, I developed a skill set covering a variety of programming languages such as Python, SystemVerilog, UVM, Perl, HTML XSLT, Bash, and more."

Joseph Early MEng Computer Science, 2019 PhD student, University of Southampton/ Alan Turing Institute

internship during your time at university. They are a fantastic way to develop your skills further and make you far more desirable when you start applying for obs after university. I completed two internships: latter gave me experience of real academic research and is what encouraged me to do a PhD."

sw 51

Adelaida Creosteanu BEng Software Engineering, 2019 Machine Learning Engineer, Algnostics

"Coming to Southampton was the best choice I coul have made and it made me grow in a lot of way only did I learn a lot about software and becom valuable engineer, I also gained experience workin my own and as part of a team. I now work at Algno a company that creates explainable AI for pathology. We help routin<mark>e diagnosis and drug research. I</mark> work on improving and extending our machine learning infrastructure, as well as training and evaluating models."

WORLD-CLASS FACILITIES

We offer state-of-the-art, industry-standard equipment that is housed in superb laboratories. The facilities are underpinned by in-lab support from specialist technicians and academic staff.

David Barron Computing Laboratory

A lively and communal facility specifically for taught students, it offers more than 100 powerful individual workstations with ultra-sharp monitors ranging from 27" up to 40". It also provides a unique space for group working, with large tables and wireless collaborative systems connected to to wallmounted displays of up to 85", and fixed and mobile glassboards for brainstorming ideas.

Find out more:

The workstations provided include Windows 10, Macs and Linux systems. They all have at least a quad-core Intel Core i7 CPU, 16GB RAM and 1TB SSD storage.

Arthur Brunnschweiler Teaching Laboratory

The labs are divided into distinct zones housing bespoke teaching benches with built-in test equipment and high definition monitors, all using a range of industry standard software.

Students can design and conduct rigorous experiments, and assemble test circuits using prototype circuit boards or PCBs.

£8m

recently invested

in specialist ECS teaching

facilities

The Hardware and Software Projects Laboratories

are Projects Laboratory

These versatile laboratories suitable for industrial-led projects are for senior undergraduates working on their third and fourth year projects. Each comprises four complementary areas to facilitate the project life cycle from initial concept through design and testing to a functional prototype.

01 Hardware Projects Laboratory

Comprised of an electrical and electronic design and prototyping suite, high voltage (HV) testing area, PCB manufacturing area, and maker space.

02 Software Projects Laboratory

Our computation suite is configured with powerful PCs and high-resolution 38" screens to support demanding computational work, but also provides space for students to bring and connect their own laptops.

66

It Southampton, we are proud of the multimillion pound nvestments we have made into our new laboratories. These tate-of-the-art facilities ensure our students use the latest echnology and facilities, and re provided with a dedicated pace to work on hardware nd software projects. We re continually improving our teaching and computing aboratories to prepare our tudents for industry and nterprise of the future."

Professor Paul Lewin Head of Electronics and Comput



Students have access to high-end graphics cards

in 120 of our PCs for deep learning projects n Machine Learning and Artificial Intelligence



03 Cleanrooms

A 730m² clean room complex. The largest multidisciplinary cleanroom of its type in the UK, offering world-class facilities and expertise in nanoelectronics, photonics fabrication, optoelectronics, quantum technologies, device physics and biotechnology.

o4Tony Davies High Voltage Laboratory

A world-class centre for research into dielectric materials, insulation systems, and high voltage and related phenomena. The laboratory houses state-of-the-art facilities and is supported by a specialist engineering team who are all involved in internationally-leading research.



COMPUTER SCIENCE AND SOFTWARE ENGINEERING

Choose Southampton



- → 100 per cent of our Computer Science research impact is recognised as world-leading or internationally excellent*
- → University partner of The Alan Turing Institute, the UK's national institute for data science and artificial intelligence
- → Opportunities for work placements and internships with more than 150 affiliated companies

Computer scientists are problem solvers, modelling and analysing challenges, and providing solutions in every area of our lives. Software engineers develop the complex, reliable and secure software systems we depend on for everyday activities. Our graduates have a world-leading reputation for creative solutions based on cutting-edge knowledge and state-of-the-art technical skills.

As a student in ECS, you'll be taught by academics who are recognised internationally as leaders in their fields of expertise.

You'll study in specially designed teaching labs that are recognised for the quality of their facilities by professional accreditation panels and visitors.

You can personalise your learning with our flexible programme. Choose interdisciplinary modules or existing modules from other programmes.

Course structure

First year

Cover the fundamentals of algorithms and maths in your lectures and tutorials. Develop yourpractical skills in programming and computer systems with extensive lab and course work.

Second year

Develop your team working through group design exercises and projects. Past challenges have included modelling runway parameters at airports or analysing and visualising data from online advertising campaigns.

Third year

Learn from academics currently researching in the computer science field, who will deliver at least one advanced module in their specialist area. Your individual project will form a major part of your third year studies, and is based on your particular interests.

Fourth year (MEng only)

Take part in an industry-driven group design project enabling you to work with academics to enhance and demonstrate your specialist practical skills. Your group will be matched with an academic working in your field of interest, and receive supervision for the duration of your research project. You'll learn to engineer professionally within a strict budget and deadline.

Professional accreditation and awards

- → Our research has achieved international recognition.
- → Our degrees are professionally accredited by the British Computer Society and the Institution of Engineering and Technology.
- → The University has received the Athena SWAN Silver Award for our commitment to tackle the problem of gender inequality in science.

Subject highlights

INDUSTRIAL PLACEMENT YEAR

Enhance your employability with a year-long paid placement in an engineering organisation and gain vital experience to prepare for your career 10II | MEng | Computer Science with Industrial Studies

II30 | MEng | Software Engineering with Industrial Studies

Find out more on page 40

Foundation Year

Designed for students without traditional entry qualifications, a Foundation Year provides an entry route to our computer science and engineering degrees.

Find out more on page 42

Facilities

Carry out individual and project work in our unrivalled laboratories. These provide dedicated and accessible spaces for our students.

- ightarrow Hardware Projects Laboratory
- ightarrow Software Projects Laboratory
- → David Barron Computing Laboratory
- → Arthur Brunnschweiler Teaching Laboratory
- \rightarrow Cyber Security Laboratory
- ightarrow Future Worlds startup accelerator

Find out more www.ecs.soton.ac.uk/facilities

100% Of employed graduates go into professional or managerial roles**

latest REF, 2014 *Employed graduates are in professional role: vithin six months of graduation-unistats 2019

10

£8m recent investment

in our state-of-the-art lab facilities Computer Science has had more than ten UK top ten positions in the *Guardian University Guid*e since its launch in 2007

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** three years UCAS code: G400 **Entry requirements** A-Levels: A*AA, including or A*A*B, including mathematics Language requirements:

Selection process:

Accreditation:

Before you apply, please

www.southampton.ac.uk/ecs/ entryreq

BSc COMPUTER SCIENCE

Choose Southampton

Learn how to develop technologies that can make a difference to people's lives, in fields ranging from medicine and finance, to games and entertainment. You'll cover the main areas of computer science, including topics such as algorithmics, data management, software design and modelling, interaction design, artificial intelligence and cyber security. You'll gain a thorough grounding in the essentials of the discipline, with the flexibility to follow vour own interests.



Course structure

Year one | Modules

- \rightarrow Algorithmics
- → Computer Systems I
- → Data Management
- → Foundations of Computer Science
- → Professional Development
- → Programming I
- → Programming II
- → Software Modelling and Design

Find out more For more details about your course such as module information and course

www.southampton.ac.uk/ecs/cs

structure, visit

12

Or to have specific questions answered: **T:**+44(0)2380599699 E: enquiry@southampton.ac.uk

Year two | Modules

- → Distributed Systems and Networks
- → Intelligent Systems
- → Interaction Design
- → Programming III
- → Programming Language Concepts
- → Software Engineering Group
- Project
- \rightarrow Theory of Computing

Year three | Modules

→ Individual Project

Plus optional modules including those on page 13

For the full range of optional module subject areas please see page 38 or visit the website.

MEng COMPUTER SCIENCE

Choose Southampton

You'll gain advanced technical knowledge and professional skills to prepare you for roles such as app developer, Web developer, software engineer or systems analyst. The MEng Computer Science builds on the three year BSc Computer Science. In your fourth year you'll develop key professional skills by undertaking a real-world project for an industry customer. You'll have excellent job prospects in a growing sector.



Fourth year Group Design Project. Students developed a bespoke end-to-end Internet of Things network incorporating hardware and software - to investigate the security of devices.

Course structure

Year one | Modules

Refer to BSc Computer Science page 12 for modules

Year two | Modules

Refer to BSc Computer Science page 12 for modules

Year three | Modules

- → Individual Project
- → Engineering Management and Law

Advanced Computer Networks, Cloud Application Development, Cyber Security, Robotic Systems, Social Computing Techniques, Web

Year four | Modules

→ Group Design Project

Plus optional modules including:

Advanced Intelligent Agents, Cryptography, Evolution of Complexity, Software Security, Wireless Networks

For the full range of optional module subject areas please see page 38 or visit the website.

Key information

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: G401 **Duration:** five years with

UCAS code: 1011 **Entry requirements**

A-Levels: A*AA, including or **A*A*B**, including mathematics

Language requirements:

Selection process:

Accreditation:

Before you apply, please

www.southampton.ac.uk/ecs/ entryreq

Plus optional modules including: Machine Learning Technologies,

infrastructure





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

www.southampton.ac.uk/ecs/cs

Or to have specific questions answered: **T:**+44(0)2380599699 E: enquiry@southampton.ac.uk

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: G4GR **Entry requirements** A-Levels: A*AA, including or A*A*B, including mathematics Language requirements:

Selection process:

Accreditation:

Before you apply, please www.southampton.ac.uk/ecs/

entryreq

MEng COMPUTER SCIENCE WITH ARTIFICIAL **INTELLIGENCE**

Choose Southampton

With a strong foundation in computer science and in-depth specialist artificial intelligence knowledge, you'll have great career prospects. You'll gain the technical and transferable skills for roles such as a computer vision engineer or AI analyst. This degree carefully balances theory and practice to give you a full computer science and AI training. You can then tailor the course through your choice of optional modules - focusing on deep learning, for example, or investigating robotics.



Year three | Modules

→ Individual Project

Year four | Modules

Inspired Robotics

→ Group Design Project

Techniques

→ Engineering Management and Law

Plus optional modules including:

Machine Learning Technologies,

Development, Social Computing

Computer Vision, Game Design and

Plus optional modules including:

Algorithmic Game Theory, Biologically

Deep Learning, Intelligent Agents,

Advanced Machine Learning,

For the full range of optional

page 38 or visit the website.

module subject areas please see

Course structure

Year one | Modules

Refer to BSc Computer Science page 12 for modules

Year two Modules

- → Distributed Systems and Networks
- → Intelligent Systems
- → Interaction Design
- → Programming III
- → Programming Language Concepts
- \rightarrow Software Engineering **Group Project**
- → Theory of Computing

www.southampton.ac.uk/ecs/cs Or to have specific questions answered: **T:**+44(0)2380599699

E: enguiry@southampton.ac.uk

Find out more

structure, visit

For more details about your course

such as module information and course

MEng COMPUTER SCIENCE WITH CYBER SECURITY

Choose Southampton

A global shortage of specialist cyber security professionals means at graduation your skills will be in demand for roles such as cyber security consultant, information security manager, network security analyst, or penetration tester. You'll gain a thorough grounding in the essentials of computer science, which forms a foundation for your cyber security studies. In specialist modules, you'll learn how to identify and address vulnerabilities in software, internetconnected devices, Web-based and networked systems.



Course structure

Year one | Modules

Refer to BSc Computer Science page 12 for modules

Year two | Modules

- → Computer Systems II
- → Distributed Systems and Networks

Plus optional modules

- Year three | Modules
- → Engineering Management and Law → Security of Cyber Physical Systems
- → Individual Project

Key information

Fees: see page 56

UCAS code: II10

Duration: four years

Entry requirements

A-Levels: A*AA, including

Language requirements:

or A*A*B, including mathematics

Senior Admissions Tutor:

Start date: September 2021

Selection process:

Accreditation:

Before you apply, please www.southampton.ac.uk/ecs/

entryreq

Plus optional modules including:

Advanced Databases, Cloud Application Development, Cyber Security, Robotic Systems

Year four | Modules

- \rightarrow Network and Web Based Security
- → Software Security
- → Group Design Project

Plus optional modules including:

Biometrics, Cyber Crime, Insecurity and the Dark Web (Cyber Security), E-Business Strategy, Web Architecture

For the full range of optional module subject areas please see page 38 or visit the website.

Find out more

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

www.southampton.ac.uk/ecs/cs

Or to have specific questions answered: **T:**+44(0)2380599699 E: enquiry@southampton.ac.uk

MEng COMPUTER SCIENCE WITH CYBER SECURITY

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: G4G6 **Entry requirements** A-Levels: A*AA, including or A*A*B, including mathematics Language requirements: **Selection process:**

Accreditation:

BEngSOFTWARE ENGINEERING

Before you apply, please

www.southampton.ac.uk/ecs/ entryregwww.southampton. ac.uk/ecs/entryreq

BEng SOFTWARE FNGINFFRING

Choose Southampton

Learn how to develop the reliable, complex and secure software systems we all depend on – from mobile banking apps to aircraft autopilot controls. You'll learn how to analyse a company's software needs, and how to design, test and build a system that meets those needs. With a qualification that is highly respected among employers, and technical skills that are sought after all over the world, you'll be prepared for a financially rewarding career.



Course structure

Year one | Modules

- \rightarrow Algorithmics
- → Computer Systems I
- → Data Management
- → Foundations of Computer Science
- \rightarrow Professional Development
- → Programming I
- → Programming II
- → Software Modelling and Design
 - Year three | Modules → Individual Project

Plus optional modules

 \rightarrow Theory of Computing

Year two | Modules

→ Intelligent Systems

→ Interaction Design

→ Programming III

Project

and Design

→ Advanced Software Modelling

→ Distributed Systems and Networks

→ Programming Language Concepts

→ Software Engineering Group

For the full range of optional module subject areas please see page 38 or visit the website.

MEng SOFTWARE **FNGINFFRING**

Choose Southampton

Put your skills into practice and experience working for a real industry or academic customer when you undertake your fourth year group design project. Your advanced technical knowledge and professional skills will prepare you for roles such as software engineer, software developer, app designer, web developer or IT solution analyst. The first three years of the MEng Software Engineering degree follow the same course structure as the BEng.



Course structure

Year one Modules

Refer to BEng Software Engineering page 16 for modules

Year two | Modules

Refer to BEng Software Engineering page 16 for modules

Year three | Modules

→ Individual Project

→ Engineering Management and Law

Plus optional modules including:

Advanced Databases, Cyber Security, Real-Time Computing and Embedded Systems, Computational Biology, Game Design and Development, Robotic Systems, Machine Learning Technologies.

Key information

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 Duration: four years UCAS code: G600 **Duration:** five years UCAS code: II30 **Entry requirements** A-Levels: A*AA, including or A*A*B, including mathematics

Language requirements:

Selection process:

Accreditation:

Before you apply, please check our website for specific requirements and full details,

www.southampton.ac.uk/ecs/ entryreqwww.southampton. ac.uk/ecs/entryreq

Year four | Modules → Group Design Project

Plus optional modules including:

Automated Code Generation, Web Development, Advanced Intelligent Agents, Biologically Inspired Robotics, Computational Finance, Data Mining, Evolution of Complexity, Semantic Web Technologies, Wireless Networks

For the full range of optional module subject areas please see page 38 or visit the website.



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

www.southampton.ac.uk/ecs/se

Or to have specific questions answered: **T:**+44(0)2380599699

E: 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/ecs/se

Or to have specific questions answered:

T:+44(0)2380599699 E: enquiry@southampton.ac.uk

ELECTRONIC AND ELECTRICAL ENGINEERING

Choose Southampton

- → World-renowned academics and excellent industry standard facilities
- \rightarrow £8m investment in our undergraduate laboratories
- \rightarrow The average starting salary for our MEng Electronic Engineering graduates is £29,000*
- More elite scholarships from the UK Electronics Skills Foundation have been awarded to ECS than to any other university

Our degrees are accredited by the Institution of Engineering and Technology

*Unistats, 2019 **Guardian University Guide, 2020 *** Complete University Guide, 2021

in the UK for career prospects**

92% of graduates are in professional roles or further study within six months of graduation

in the UK for Electrical & Electronic Engineering*** Electronics is the study of the physical components, software and systems that bring electronic devices to life, while electrical engineering investigates the generation, distribution and use of electricity on a large scale. Electrical and electronic engineering enables you to learn about both disciplines. Southampton has an unrivalled reputation in electronic and electrical engineering and our graduates are employed worldwide in highly prestigious positions.

As a student in ECS, you'll be taught by academics who are recognised internationally as leaders in their fields of expertise.

You'll study in specially designed teaching labs that are recognised for the quality of their facilities by professional accreditation panels and visitors.

You can personalise your learning with our flexible programme. Choose interdisciplinary modules alongside contemporary topics such as artificial intelligence from related areas of computer science.

Course structure

First year

Develop your practical skills through an extensive portfolio of laboratory classes while being introduced to a range of fundamental electrical and electronic topics in an accessible manner.

Subject highlights 🗸

INDUSTRIAL PLACEMENT YEAR

Enhance your employability with a year-long paid placement in an engineering organisation and gain vital experience to prepare for your career

H611 | MEng | Aerospace Electronic Engineering with Industrial Studies

B901 | MEng | Biomedical Electronic Engineering with Industrial Studies

HH62 | MEng | Electrical Engineering with Industrial Studies

Find out more on page 40

Second year

Continue to build your core technical knowledge, carrying out design exercises and group projects to gain experience in team working. Past challenges include creating a home AI system and the design/build of a quadrocopter.

Third year

Personalise your degree by selecting from a wide range of options delivered by over 100 different academics with a diverse range of specialisms. You will also spend the year delivering a major individual research project.

Fourth year (MEng only)

Choose five options from our wide portfolio, as well as taking part in an intensive group design project where you will put your technical skills into practice to deliver against an industrial specification.

HH60 | MEng | Electrical and

Electronic Engineering with

HH61 | MEng | Electronic

Engineering with Industrial

H36H | MEng | Mechatronic

Engineering with Industrial

Industrial Studies

Studies

Studies

Facilities

You'll work in high-spec electronics and computer labs equipped with the latest equipment, hardware and software. You could also undertake work in our state of- the-art nanofabrication cleanrooms or in the Tony Davies High Voltage Laboratory – a centre for cutting-edge electrical power research, one of just a few labs of its kind in the UK.

Professional accreditation and awards

- → Our work has been recognised nationally and internationally.
- → Our degrees are accredited by the Institution of Engineering and Technology
- → The University has also received the Athena SWAN Silver Award for its commitment to tackle the problem of gender inequality in science

Foundation Year

Designed for students without traditional entry qualifications, a Foundation Year provides an entry route to our computer science and engineering degrees.

Find out more on page 42

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** three years UCAS code: H620 **Entry requirements** A-levels: AAA, including

BEng ELECTRICAL ENGINEERING

Language requirements: English language qualifications approved by the University, please refer to our website Selection process:

Funding: scholarships and paid

Accreditation: The Institution of Before you apply, please www.southampton.ac.uk/ecs/

entryreq



For more details about your course

such as module information and course structure visit

www.southampton.ac.uk/ecs/ee

Or to have specific questions answered:

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BEng ELECTRICAL ENGINEERING

Choose Southampton

Enter the world of large-scale electrical power and learn to develop systems and technologies that will underpin our power networks for decades to come. From sustainable energy generation to the use of electric vehicles, big changes in the way we produce and use power are posing exciting challenges for today's electrical engineers. This course will equip you with the skills to address these challenges.



Course structure

Year one | Modules

- \rightarrow Digital Systems and Microprocessors
- → Electrical Materials and Fields
- → Electronic Circuits
- → Electronic Systems
- → Mathematics for Electronic and **Electrical Engineering**
- → Mechanics
- \rightarrow Programming
- \rightarrow Solid State Devices

Year two | Modules

- → Applied Electromagnetics
- → Control and Communications

- → Engineering Design
- \rightarrow Mathematics for Electronics and Electrical Engineering Part II
- → Power Circuits and Transmission
- Power Electronics and Drives

Year three | Modules

- → High Voltage Engineering
- → Power Systems Technology
- → Individual Project

Plus optional modules

For the full range of optional module subject areas please see page 38 or visit the website.

MEng ELECTRICAL **FNGINFFRING**

Choose Southampton

Prepare to play a leading role in one of today's most critical industries, and contribute to the development of a smarter, greener and more secure electric power grid. Gain the skills to run and monitor large-scale energy distribution systems. You'll have excellent career prospects due to a shortage of qualified electrical engineers. You'll learn in outstanding facilities and be taught by expert academics. The MEng degree builds on the three-year BEng degree.



Year four | Modules

→ Group Design Project

Plus optional modules including:

Generation: Technology and Impact on

Society, Power and Distribution, High

Power System Economics, Power

Voltage Insulation Systems, Power

Electronics for DC Transmission,

Medical Electrical and Electronic

For the full range of optional

page 38 or visit the website.

module subject areas please see

Technologies

Course structure

Year one | Modules

Refer to BEng Electrical Engineering page 20 for modules

Year two | Modules

Refer to BEng Electrical Engineering page 20 for modules

Year three | Modules

- → Engineering Management and Law
- \rightarrow High Voltage Engineering
- → Power Systems Technology
- → Individual Project

Plus optional modules including:

Robotic Systems, Control System Design, Digital Control System Design, Power Systems Engineering, Introduction to Bionanotechnology

Key information Senior Admissions Tutor:

Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: H601 **Duration:** five years with UCAS code: HH62 **Entry requirements** A-levels: A*AA, including or **A*A*B**, including grades A*A*

Language requirements:

Selection process:

Funding: scholarships and paid of Engineering and Technology (including their 'Power Academy' scheme). www.southampton.ac.uk/

Accreditation: The Institution Before you apply, please www.southampton.ac.uk/ecs/

entryreq

Find out more

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

www.southampton.ac.uk/ecs/ee

Or to have specific questions answered:

T:+44(0)2380599699 E: enquiry@southampton.ac.uk

20

→ Electrical Machines

→ Materials

Senior Admissions Tutor: Dr Stuart Boden Start date: September 2021 Fees: see page 56 Duration: three years UCAS code: H600 Entry requirements A-levels: AAA, including mathematics and an additional required subject¹ or A*AB, including grades A*A in mathematics and an additional required subject (in any order)¹ ¹Either physics, electronics, computer science or further mathematics. A pass in the Science Practical is required where applicable

Language requirements: band B IELTS 6.5 overall, with minimum of 5.5 in all compor For more information on oth English language qualificatio approved by the University, p refer to our website Selection process: UCAS application

BEng ELECTRICAL AND ELECTRONIC ENGINEERING

Funding: scholarships and paid industrial placements are available from the UK Electronics Skills Foundation and the Institution of Engineering and Technology (including their 'Power Academy' scheme) www.southampton.ac.u ecs/money

Accreditation: The Institution of Engineering and Technology Our typical entry requirements may be subject to change. Before you apply, please check our website for specific requirements and full details, including other qualifications we accept.

www.southampton.ac.uk/ecs/ entryreq

Find out more

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

www.southampton.ac.uk/ecs/eee

- Or to have specific questions answered:
- **T:** +44 (0)2380599699 **E:** enquiry@southampton.ac.uk

BEng ELECTRICAL AND ELECTRONIC ENGINEERING

Choose Southampton

Study across the spectrum of electrical and electronic engineering and gain the skills to solve some of today's biggest engineering challenges. You'll be equipped to design new technologies in the many sectors where knowledge of both disciplines is crucial. Smarter energy distribution, more efficient hybrid vehicles, cleaner power generation and intelligent robotics are just some examples. Outstanding facilities and strong industry links make Southampton a great place to study these interconnected subjects.



Course structure

Year one | Modules

- → Digital Systems and Microprocessors
- \rightarrow Electrical Materials and Fields
- → Electronic Circuits
- → Electronic Systems
- → Mathematics for Electronic and Electrical Engineering
- \rightarrow Programming
- → Solid State Devices
- → Advanced Programming or Mechanics

Year two Modules

- \rightarrow Control and Communications
- Digital Systems and Signal Processing

- → Electrical and Electronic Engineering Design
- \rightarrow Electromagnetism for EEE
- → Mathematics for Electronics and Electrical Engineering Part II
- \rightarrow Power Circuits and Transmission
- \rightarrow Power Electronics and Drives

Plus one optional module

Year three | Modules

ightarrow Individual Project

Plus optional modules including:

Control System Design, Digital IC and Systems Design, Wireless and Optical Communications, High Voltage Engineering, Embedded Networked Systems, Green Electronics, Power Systems Technology

For the full range of optional module subject areas please see page 38 or visit the website.

MEng ELECTRICAL AND ELECTRONIC ENGINEERING

Choose Southampton

Prepare for an exciting career in one of the many sectors where electronic and electrical engineering meet – from electric vehicle design to the development of smart biomedical devices. Advanced professional and technical skills, and the ability to approach problems from both an electrical and electronic engineering perspective, will give you excellent career prospects. The MEng degree builds on the three year BEng degree.



Plus optional modules including:

Optical Communications, High Voltage

Engineering, Embedded Networked

Systems, Green Electronics, Power

Plus optional modules including:

Wireless Networks, Image Processing,

Economics, High Voltage Insulation

Systems, Data Mining, Embedded

For the full range of optional

page 38 or visit the website.

module subject areas please see

Systems Technology

Year four | Modules

Processors

→ Group Design Project

Cryptography, Power System

Control System Design, Digital IC

and Systems Design, Wireless and

Course structure

Year one | Modules

Refer to BEng Electrical and Electronic Engineering page 22 for modules

Year two Modules

Refer to BEng Electrical and Electronic Engineering page 22 for modules

Year three | Modules

→ Engineering Management and Law

→ Individual Project

Key information

Senior Admissions Tutor: Dr Stuart Boden Start date: September 2021 Fees: see page 56 Duration: four years UCAS code: H602 Duration: five years with Industrial Studies UCAS code: HH60 Entry requirements A-levels: A*AA, includincg

required subject[†] or **A*A*B**, including grades A*A* in mathematics and an additional required subject[†] [†]Either physics, electronics, computer science or further mathematics. A pass in the Science Practical is required where applicable

Language requirements:

band B IELTS 6.5 overall, with a minimum of 5.5 in all components For more information on other English language qualifications approved by the University, pleas refer to our website

Selection process: UCAS application

Funding: scholarships and paid industrial placements are available from the UK Electronics Skills Foundation and the Institution of Engineering and Technology (including their 'Power Academy' scheme) www.southampton.ac.uk ecs/money

Accreditation: The Institution of Engineering and Technology Our typical entry requirements may be subject to change. Before you apply, please check our website for specific

requirements and full details, including other qualifications we accept.

www.southampton.ac.uk/ecs/ entryreq

Find out more

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

www.southampton.ac.uk/ecs/eee

Or to have specific questions answered:

T:+44(0)2380599699 **E:**enquiry@southampton.ac.uk

Senior Admissions Tutor: Dr Stuart Boden Start date: September 2021 Fees: see page 56 Duration: three years UCAS code: H403 Entry requirements A-levels: AAA, including mathematics and an additional required subject[†] or A*AB, including grades A*A in mathematics and an additional required subject (in any order)[†] [†]Either physics, electronics or further mathematics. A pass in th Science Practical is required whe applicable Language requirements:

band B IELTS 6.5 overall, with a minimum of 5.5 in all components. For more information on other English language qualifications approved by the University, please refer to our website Selection process:

BEng AEROSPACE ELECTRONIC ENGINEERING

UCAS application

Funding: scholarships and paid industrial placements are availabl from the UK Electronics Skills Foundation

Accreditation: The Institution of Engineering and Technology Our typical entry requirements may be subject to change.

Before you apply, please check our website for specific requirements and full details, including other qualifications we accept.

www.southampton.ac.uk/ecs/ entryreq



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

www.southampton.ac.uk/ ecs/aero

Or to have specific questions answered: $\mathbf{T}: +44(0)2380599699$

E: enquiry@southampton.ac.uk

BEng AEROSPACE ELECTRONIC ENGINEERING

Choose Southampton

Prepare for a career in the aerospace industry and help to design the aircraft and spacecraft of the future. This degree gives you a unique opportunity to learn about core areas of electronics and gain specialist knowledge of aerospace electronic systems. You'll learn from experts with real industry experience; our academics have worked on projects with NASA and the European Space Agency (ESA).



Course structure

Year one | Modules

- → Digital Systems and Microprocessors
- → Electronic Circuits
- → Electronic Systems
- → Flight Mechanics and Aerospace Systems Engineering
- ightarrow Mathematics for Electronic and Electrical Engineering
- → Mechanics
- → Programming
- ightarrow Solid State Devices
- Year two | Modules
- → Mathematics for Electronics and Electrical Engineering Part II
- ightarrow Control and Communications

- → Digital Systems and Signal Processing
- → Electrical Machines
- \rightarrow Power Electronics and Drives
- → Electromechanical Energy Conversion
- ightarrow Aerospace Electronics Design
- ightarrow Radar Techniques and Applications

Year three | Modules

- ightarrow Guidance, Navigation and Control
- \rightarrow Space Systems Engineering
- → Individual project

Plus optional modules including:

Mechanical Power Transmission and Vibration, Manufacturing and Materials, Automobile Systems, Security of Cyber Physical Systems

For the full range of optional module subject areas please see page 38 or visit the website.

MEng AEROSPACE ELECTRONIC ENGINEERING

Choose Southampton

Gain the skills to work in a large aerospace engineering company or work for one of the smaller technology companies that supply them. The MEng degree builds on the three-year BEng Aerospace Electronic degree. A distinctive feature of the four-year programme is the group design project, where you'll put your skills into practice and experience working for an industry or academic customer.



Plus optional modules

Year four | Modules

→ Group Design Project

Electronics for Spacecraft

Mechanical Power Transmission

and Vibration, Manufacturing and

Security of Cyber Physical Systems

Plus optional modules including:

GPS and its Applications, Robotic

For the full range of optional

(Autonomous) Aerospace Vehicles,

Materials, Automobile Systems,

Course structure

Year one | Modules

Refer to BEng Aerospace Electronic Engineering page 24 for modules

Year two | Modules

Refer to BEng Aerospace Electronic Engineering page 24 for modules

Year three | Modules

→ Individual Project

- \rightarrow Engineering Management and Law \rightarrow Guidance, Navigation and Control **module subject areas please see page 38 or visit the website.**
- \rightarrow Space Systems Engineering

Key information

Senior Admissions Tutor: Dr Stuart Boden Start date: September 2021 Fees: see page 56 Duration: four years UCAS code: H402 Duration: five years with Industrial Studies UCAS code: H611 Entry requirements

Entry requirements A-levels: A*AA, including mathematics and an additional required subject[†] or A*A*B, including grades A*A*

in mathematics and an additional required subject[†] 'Either physics, electronics or further mathematics. A pass in the Science Practical is required wher applicable

Language requirements:

band B IELTS 6.5 overall, with a minimum of 5.5 in all components For more information on other English language qualifications approved by the University, please refer to our website

Selection process: UCAS application

Funding: scholarships and paid industrial placements are available from the UK Electronics Skills Foundation

Accreditation: The Institution of Engineering and Technology Our typical entry requirements may be subject to change.

Before you apply, please check our website for specific requirements and full details, including other qualifications

www.southampton.ac.uk/ecs/ entryreq

Find out more

such as module information and course structure, visit

www.southampton.ac.uk/ ecs/aero Or to have specific questions answered:

T:+44(0)2380599699 **E:** enquiry@southampton.ac.uk

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Senior Admissions Tutor: Dr Stuart Boden Start date: September 2021 Fees: see page 56 Duration: three years UCAS code: BB90 Entry requirements: A-levels: AAA, including mathematics and an additional required subject[†] or A*AB, including grades A*A in mathematics and an additional required subject (in any order)[†] [†]Either physics, electronics, chemistry, biology or further mathematics. A pass in the Science Practical is required where applicable

Language requirements: band B IELTS 6.5 overall, with minimum of 5.5 in all compor For more information on oth English language qualificatio approved by the University, p refer to our website Selection process: UCAS application

BEng BIOMEDICAL ELECTRONIC ENGINEERING

Funding: scholarships and paid industrial placements are available from the UK Electronics Skills Foundation

Accreditation: The Institution of Engineering and Technology Our typical entry requirements may be subject to change.

Before you apply, please check our website for specific requirements and full details, including other qualifications we accept.

www.southampton.ac.uk/ecs/ entryreq



Find out more For more details about your course

such as module information and course structure, visit

www.southampton.ac.uk/ ecs/bio

Or to have specific questions answered: **T:**+44 (0)238059 9699

E: enquiry@southampton.ac.uk

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BEng BIOMEDICAL ELECTRONIC ENGINEERING

Choose Southampton

Join the next generation of digital health technology engineers and design the health and wellbeing devices of the future. This unique degree combines our highly regarded electronics training with the study of biomedicine, giving you the skills to create sensors, apps and digital systems for a range of applications – from rehabilitation following a stroke to the management of conditions such as diabetes. This course will equip you for a career in a thriving sector.



Course structure

Year one | Modules

- Digital Systems and Microprocessors
- ightarrow Electrical Materials and Fields
- → Electronic Circuits
- → Electronic Systems for Biomedicine
 → Mathematics for Electronic and Electrical Engineering
- \rightarrow Molecular Basis of Life
- \rightarrow Programming
- → Solid State Devices

Year two | Modules

- → Advanced Electronic Systems
- → Biomedical Control
- → Fundamentals of Cell Biology and Physiology

- → Digital Systems and Signal Processing
- ightarrow Health Technologies Design Project
- → Mathematics for Electronics and Electrical Engineering Part II
- → Semiconductor Devices and Sensors

Year three | Modules

- ightarrow Biosensors and Diagnostics
- \rightarrow Principles of Neuroscience
- → Individual Project

Plus optional modules including:

Signal and Image processing, Computational Biology, Machine Learning Technologies, Robotic Systems, Digital Control Systems Design

For the full range of optional module subject areas please see page 38 or visit the website.

MEng BIOMEDICAL ELECTRONIC ENGINEERING

Choose Southampton

The four-year integrated masters degree builds on the BEng course. In your fourth year you'll undertake a group design project for a real-world customer, giving you invaluable professional experience. You'll have excellent career prospects-employers seek out our students because they are equipped to start contributing in the workplace straight away.



Plus optional modules including:

Signal and Image Processing,

Year four | Modules

→ Group Design Project

 \rightarrow Medical Sensors and

Instrumentation

Design

Computational Biology, Machine

Learning Technologies, Robotic

Systems, Digital Control Systems

→ Microfluidics and Lab-on-a-Chip

Plus optional modules including:

Bio/Micro/Nano Systems, Biologically

Technologies, Nanofabrication and

Inspired Robotics, Microsensor

Microscopy, Image Processing

For the full range of optional

page 38 or visit the website.

module subject areas please see

Course structure

Year one | Modules

Refer to BEng Biomedical Electronic Engineering page 26 for modules

Year two Modules

Refer to BEng Biomedical Electronic Engineering page 26 for modules

Year three Modules

- → Biosensors and Diagnostics
 → Engineering Management and Law
- → Principles of Neuroscience
- Individual Draiget
- ightarrow Individual Project

Key information

Senior Admissions Tutor: Dr Stuart Boden Start date: September 2021 Fees: see page 56 Duration: four years UCAS code: B90B Duration: five years with Industrial Studies UCAS code: B90I Entry requirements A-levels: A*AA, including mathematics and an additional required subject¹ or A*A*B, including grades A*A* in mathematics and an additional required subject¹ 'Either physics, electronics,

chemistry, biology or further mathematics. A pass in the Scien Practical is required where applicable

Language requirements:

band B IELTS 6.5 overall, with a minimum of 5.5 in all components For more information on other English language qualifications approved by the University, please refer to our website

Selection process: UCAS application

Funding: scholarships and paid industrial placements are available from the UK Electronics Skills Foundation

Accreditation: The Institution of Engineering and Technology Our typical entry requirements may be subject to change.

Before you apply, please check our website for specific requirements and full details, including other qualifications we accept. www.southampton.ac.uk/ecs/ entryreq

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Find out more

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

www.southampton.ac.uk/ ecs/bio

Or to have specific questions answered: **T:**+44 (0)2380599699

E: enquiry@southampton.ac.uk

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** three years UCAS code: H610 **Entry requirements:** A-levels: AAA, including or **A*AB**, including grades A*A in

Language requirements:

English language qualifications approved by the University, please

Selection process:

Funding: scholarships and paid

Accreditation: The Institution of Before you apply, please

www.southampton.ac.uk/ecs/ entryreq

Find out more

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

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered: **T:**+44(0)2380599699

E: enquiry@southampton.ac.uk

BEng ELECTRONIC ENGINEFRING

Choose Southampton

Learn about the components within electronic systems and how they work together, for example to analyse data or display information on a screen. It's a technical but also highly creative subject; you'll learn to solve problems by designing, building and testing new electronic systems skills that can be applied to real-world challenges ranging from sustainable energy production to cyber security. You'll benefit from outstanding facilities, a range of optional modules and strong industry links.



Course structure

Year one | Modules

- \rightarrow Programming
- \rightarrow Advanced Programming
- → Digital Systems and Microprocessors
- → Electrical Materials and Fields
- \rightarrow Electronic Circuits
- → Electronic Systems
- \rightarrow Mathematics for Electronic and Electrical Engineering
- → Solid State Devices

Year two Modules

- → Control and Communications
- → Digital Systems and Signal Processing
- → Electromagnetism for Communications

→ Electronic Design \rightarrow Mathematics for Electronics and Electrical Engineering Part II

Plus optional modules

Devices, Computer Engineering, Advanced Electronic Systems, Photonics I

Year three | Modules

→ Individual Project

Plus optional modules including:

Robotic Systems, Digital IC and Systems Design, Computational Biology, Web and Cloud-Based Security, Digital Coding and Transmission, Photonics II, Foundations of Machine Learning

For the full range of optional module subject areas please see page 38 or visit the website.

MEng ELECTRONIC **FNGINFFRING**

Choose Southampton

Be prepared for professional and managerial roles such as electronic engineer, design and development engineer, technology analyst or systems engineer. The MEng builds on the BEng Electronic degree. In your fourth year you'll undertake a group design project for a real-world customer, giving you invaluable professional experience. You'll have excellent career prospects; employers seek out our students because they are equipped to start contributing in the workplace straight away.



Year four | Modules

→ Group Design Project

Transceiver Design and

Wireless Networks, Wireless

Synthesis, Microfabrication,

Implementation, Digital Systems

Quantum Devices and Technology,

For the full range of optional

page 38 or visit the website.

module subject areas please see

Computational Finance, Deep Learning

Plus optional modules including:

Course structure

Year one Modules

Refer to BEng Electronic Engineering page 28 for modules

Year two | Modules

Refer to BEng Electronic Engineering page 28 for modules

Year three | Modules

- → Engineering Management and Law
- → Individual Project

Plus optional modules including:

Robotic Systems, Digital IC and Systems Design, Computational Biology, Web and Cloud-Based Security, Digital Coding and Transmission, Photonics II, Foundations of Machine Learning

Key information

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 Duration: four years UCAS code: H603 **Duration:** five years UCAS code: HH61

Entry requirements: A-levels: A*AA, including

or **A*A*B**, including grades A*A* in mathematics and an additional

MEng ELECTRONIC ENGINEERING

Language requirements:

Selection process:

Funding: scholarships and paid

Accreditation: The Institution of

Before you apply, please

www.southampton.ac.uk/ecs/

entryreq

Find out more

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

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered: **T:**+44(0)2380599699

E: enquiry@southampton.ac.uk

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: H6G7 **Entry requirements** A-levels: A*AA, including or **A*A*B**, including grades A*A*

Language requirements: Selection process:

MEng ELECTRONIC ENGINEERING WITH ARTIFICIAL INTELLIGENCE

Funding: scholarships and paid

Accreditation: The Institution of

Before you apply, please

www.southampton.ac.uk/ecs/ entryreq

Find out more

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

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered:

T:+44(0)2380599699

E: enquiry@southampton.ac.uk

MEng ELECTRONIC **ENGINEERING WITH ARTIFICIAL INTELLIGENCE**

Choose Southampton

Prepare for a role in one of today's most dynamic and exciting areas of technology. From facial recognition software to self-driving cars, artificial intelligence (AI) plays a growing role in everyday life. You'll gain the skills to develop the intelligent technologies of tomorrow. A long-established centre for AI research, we offer a range of specialist options, both in terms of the number of modules and the breadth of topics you can explore. You'll graduate with a skill set that is in huge demand across industry and business.



Course structure

Year one Modules **Refer to BEng Electronic**

Engineering page 28 for modules

Year two Modules

Refer to BEng Electronic Engineering page 28 for modules

Year three | Modules

- → Engineering Management and Law
- → Foundations of Machine Learning
- → Individual Project

MEng ELECTRONIC **ENGINEERING WITH COMPUTER SYSTEMS**

Choose Southampton

Gain a complete understanding of the components that underpin today's computers and electronic devices, and the skills to design new reliable and secure computer systems. You'll have the freedom to choose from a huge breadth of options, including numerous specialist modules, taught in labs that are among the best in the UK. Our academic expertise and strong links with microprocessor technology companies ensure our electronic engineering courses reflect the latest advances in computer systems.



Bradley McLaughlin built a device for monitoring the air quality within primary school classrooms for his third year individual project

Course structure

Year one | Modules

Refer to BEng Electronic Engineering page 28 for modules

Year two Modules

- → Computer Engineering
- \rightarrow Control and Communications
- → Digital Systems and Signal Processing

→ Mathematics for Electronics and

Electrical Engineering Part II

- \rightarrow Electromagnetism for Communications
- → Electronic Design

Plus optional modules

Devices, Advanced Electronic Systems, Photonics I

Key information

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: H6G4 **Entry requirements:** A-levels: A*AA, including or **A*A*B**, including grades A*A*

Language requirements:

Selection process:

Funding: scholarships and paid

Accreditation: The Institution

Before you apply, please

www.southampton.ac.uk/ecs/ entryreq

Find out more

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

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered:

T:+44(0)2380599699 E: enquiry@southampton.ac.uk



Year three | Modules

→ Individual Project

Year four | Modules

Embedded Devices

→ Group Design Project

Security

→ Digital IC and Systems Design

→ Engineering Management and Law

Plus optional modules including:

Realtime Computing and Embedded

Architecture, Embedded Networked

Plus optional modules including:

Synthesis, Embedded Processors, SOC

Design Project, Secure Hardware and

module subject areas please see page 38 or visit the website.

For the full range of optional

VLSI System Design, Digital Systems

Systems, Advanced Computer

Systems, Web and Cloud-Based

Year four | Modules

→ Group Design Project

Plus optional modules including:

Evolution of Complexity, Advanced Machine Learning, Computational Finance, Computer Vision, Data Mining

For the full range of optional module subject areas please see page 38 or visit the website.

Plus optional modules including: Computational Biology, Robotic Systems, Signal and Image Processing,

Web and Cloud-Based Security

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: H691 **Entry requirements** A-levels: A*AA, including or **A*A*B**, including grades A*A*

Language requirements: Selection process: Funding: scholarships and paid

Accreditation: The Institution of

www.southampton.ac.uk/ecs/ entryreq

Before you apply, please

Find out more

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

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered:

T:+44(0)2380599699

E: enquiry@southampton.ac.uk

MEng ELECTRONIC ENGINEERING WITH MOBILE AND SECURE SYSTEMS

Choose Southampton

Learn how to develop secure electronic systems and devices, and help protect individuals, businesses and governments against the growing threat of cyber crime and data breaches. Southampton is a centre of excellence for cyber security research, which means you'll learn from experts who are contributing to the latest advances in the field. You'll graduate with superb career prospects in industry and the public sector, where cyber security skills are in great demand.



Course structure

Year one | Modules

Refer to BEng Electronic Engineering page 28 for modules

Year two | Modules

Refer to BEng Electronic Engineering page 28 for modules

Year three | Modules

- → Engineering Management and Law → Security of Cyber Physical Systems
- → Individual Project

Plus optional modules including: Web and Cloud Based Security, Real

time Computing and Embedded Systems, Embedded Networked Systems

Year four | Modules

→ Group Design Project

Plus optional modules including:

Wireless Networks, Cryptography, Advanced Wireless Communications Networks and Systems

For the full range of optional module subject areas please see page 38 or visit the website.

MEng ELECTRONIC **ENGINEERING WITH** NANOTECHNOLOGY

Choose Southampton

Gain the skills to design and test microscopic electronic devices, and learn about innovations in nanotechnology that will underpin the next generation of computing and electronics. Our superb nanofabrication facilities attract the most talented researchers which means you'll learn from experts who are involved in the latest advances in the field. You'll have the flexibility to choose from a range of optional modules in nanotechnology and across the spectrum of electronics and computer science.



Course structure

Year one | Modules

Refer to BEng Electronic

Engineering page 28 for modules

Year two | Modules

- → Control and Communications
- \rightarrow Devices → Digital Systems and Signal
- Processing
- → Electromagnetism for Communications
- → Electronic Design
- → Mathematics for Electronics and Electrical Engineering Part II

Plus optional modules

Computer Engineering, Advanced Electronic Systems, Photonics I

Year three | Modules

- → Engineering Management and Law
- → Nanoelectronic Devices → Individual Project

Plus optional modules including:

Green Electronics, Photonics II, Introduction to Bionanotechnology

Year four | Modules

→ Group Design Project

Plus optional modules including:

Microfabrication, Microsensor Technologies, Microfluidics and Lab-on-a-chip, Quantum Devices and Technology

For the full range of optional module subject areas please see page 38 or visit the website.

Key information

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: H611 **Entry requirements** A-levels: A*AA, including or **A*A*B**, including grades A*A* Language requirements:

Selection process:

Funding: scholarships and paid

Accreditation: The Institution of

Before you apply, please

www.southampton.ac.uk/ecs/ entryreq

Find out more

structure, visit

T:+44(0)2380599699

For more details about your course

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered:

E: enquiry@southampton.ac.uk

such as module information and course

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Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: H680 **Entry requirements** A-levels: A*AA, including or **A*A*B**, including grades A*A*

Language requirements: Selection process:

Funding: scholarships and paid

Accreditation: The Institution Before you apply, please

www.southampton.ac.uk/ecs/ entryreq

Find out more

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

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered: **T:**+44(0)2380599699 E: enquiry@southampton.ac.uk

MEng ELECTRONIC **ENGINEERING WITH PHOTONICS**

Choose Southampton

Enhance your electronic engineering degree with specialist training in photonics - the science and technology of light. Home to the UK's largest photonics research centre, we're the only UK university to offer an undergraduate electronic engineering degree with photonics. You can choose from an unrivalled range of specialist modules, covering the latest advances in areas such as quantum devices and optical fibre technology. Your skill set will prepare you for a successful career in photonics.



Year three | Modules

→ Individual Project

Year four | Modules

Optical Fibre Systems

→ Group Design Project

Devices

 \rightarrow Engineering Management and Law

Plus optional modules including:

Photonics II, Digital Coding and

Transmission, Wireless and Optical

Communications, Nanoelectronic

Plus optional modules including:

Advanced Fibre Telecommunications,

Silicon Photonics, Optical Fibres,

For the full range of optional

page 38 or visit the website.

module subject areas please see

Course structure

Year one Modules

Refer to BEng Electronic Engineering page 28 for modules

Year two | Modules

- → Control and Communications
- → Digital Systems and Signal Processing → Electromagnetism for
- Communications
- → Electronic Design
- → Mathematics for Electronics and Electrical Engineering Part II Photonics I

Plus optional modules

Computer Engineering, Advanced Electronic Systems, Devices

MEng ELECTRONIC **ENGINEERING WITH** WIRELESS COMMUNICATIONS

Choose Southampton

Gain the knowledge and practical skills to meet industry's growing need for wireless communications professionals. From Wi-Fi to satellite navigation systems, wireless communications underpin the technologies we take for granted today. It's a sector that's set to boom as wireless connectivity becomes integral to more and more devices. If you are interested in mathematical theory and want to apply it to real-world electronic engineering problems, this course will suit you.



Course structure

Year one | Modules

Refer to BEng Electronic Engineering page 28 for modules

Year two | Modules

Year three | Modules

Refer to BEng Electronic

Engineering page 28 for modules

- → Digital Coding and Transmission
- → Engineering Management and Law
- → Individual Project

Key information

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: H641 **Entry requirements:** A-levels: A*AA, including or **A*A*B**, including grades A*A* Selection process: Funding: scholarships and paid

Accreditation: The Institution

Before you apply, please

check our website for specific requirements and full details,

www.southampton.ac.uk/ecs/ entryreq

Plus optional modules including: Signal and Image Processing, Wireless

and Optical Communications, Security of Cyber Physical Systems

Year four | Modules

→ Group Design Project

Plus optional modules including:

Advanced Wireless Communications Networks and Systems, Wireless Transceiver Design and Implementation, Wireless Networks, Future Wireless Techniques, Machine Learning for Wireless Communications

For the full range of optional module subject areas please see page 38 or visit the website.



Find out more

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

www.southampton.ac.uk/ecs/ele

Or to have specific questions answered:

T:+44(0)2380599699 E: enquiry@southampton.ac.uk

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Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** three years UCAS code: HH36 **Entry requirements:** A-levels: AAA, including or **A*AB**, including grades A*A in

Language requirements:

English language qualifications approved by the University, please

Selection process:

Funding: scholarships and paid

Accreditation: The Institution of

Before you apply, please www.southampton.ac.uk/ecs/

entryreq



Find out more For more details about your course

such as module information and course structure.visit

www.southampton.ac.uk/ecs/me

Or to have specific questions answered: **T:**+44(0)2380599699

E: enquiry@southampton.ac.uk

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BEng MECHATRONIC FNGINFFRING

Choose Southampton

Gain the skills to design intelligent machines - from electric vehicles to large-scale industrial robots. You'll study electrical and mechanical engineering, alongside elements of electronics and programming. You'll learn how to integrate these disciplines in the design of systems that rely on mechanical elements, electrical power, sensing and control. The increasing complexity of electro-mechanical systems has led to a demand for engineers with this multidisciplinary skill set, so you'll graduate with excellent job prospects.



Course structure

Year one | Modules

- \rightarrow Digital Systems and Microprocessors
- → Electrical Materials and Fields
- → Electronic Circuits → Electronic Systems
- \rightarrow Mathematics for Electronic and **Electrical Engineering**
- \rightarrow Mechanics
- → Programming
- \rightarrow Solid State Devices

Year two Modules

- → Circuits and Systems
- \rightarrow Control and Communications
- → Electrical Machines
- → Electromechanical Energy Conversion

→ Engineering Design

- \rightarrow Materials
- → Mathematics for Electronics and Electrical Engineering Part II
- → Power Electronics and Drives

Year three | Modules

- → Fluids and Mechanical Materials
- Mechanical Power Transmission
- and Vibration
- → Power Systems Technology
- → Individual Project

Robotic Systems, Control Systems Design, Space Systems Engineering, Manufacturing and Materials,

For the full range of optional module subject areas please see page 38 or visit the website.

MEng MECHATRONIC **FNGINFFRING**

Choose Southampton

Prepare for a leading role in the development of tomorrow's intelligent machines and devices. The MEng builds on the three year BEng degree. In your fourth year you'll undertake a group design project for a real-world customer, giving you invaluable professional experience. You'll be equipped to work in any field of engineering that combines mechanical engineering and electronics.



Course structure

Year one | Modules

Refer to BEng Mechatronic Engineering page 36 for modules

Engineering page 36 for modules

→ Engineering Management and Law

→ Power Systems Technology

→ Fluids and Mechanical Materials

→ Mechanical Power Transmission

Year two Modules

Year three | Modules

Individual Project

and Vibration

Refer to BEng Mechatronic

Plus optional modules including:

Automobile Systems



Year four | Modules

→ Group Design Project

Plus optional modules including:

Biologically Inspired Robotics, Medical Electrical and Electronic Technology, Power Systems Economics, **Microsensor Technologies**

For the full range of optional

module subject areas please see page 38 or visit the website.

Key information

Senior Admissions Tutor: Start date: September 2021 Fees: see page 56 **Duration:** four years UCAS code: HHH6 **Duration:** five years UCAS code: H36H **Entry requirements** A-levels: A*AA, including or **A*A*B,** including grades A*A*

Language requirements:

MEng MECHATRONIC ENGINEERING

Selection process:

Funding: scholarships and paid of Engineering and Technology (including their 'Power Academy'

Accreditation: The Institution of Before you apply, please www.southampton.ac.uk/ecs/ entryreq

Find out more

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

www.southampton.ac.uk/ecs/me

Or to have specific questions answered: **T:**+44(0)2380599699 E: enquiry@southampton.ac.uk

OPTIONAL MODULES

As well as your core modules, you will also be able to choose from an extensive range of optional modules that reflect the specialist areas of your programme, and key technology areas that will be critical in the future.

A range of the subject areas available for you to choose modules from are listed below.

Agent-Based Computing	High Voltage Systems
Analogue and Digital Electronics	Integrated Circuits
Artificial Intelligence	Intelligent Agents
Bioinspired Robotics	Intelligent Algorithms
Biomedical Technology	Image Processing
Computational Finance	Machine Learning
Computer Vision	Medical Technology
Control Systems	Metamaterials, Nanophotonics, and Plasmonics
Critical Systems	Micro Electromechanical Machines
Cryptography	Micro and Nano Fabrication
Cyber Security	Nanoelectronics
Digital Coding and Transmission	Nanotechnology
Distributed Systems	Online Social Networks
E-Business Strategy	
Embedded Systems	Optical Fibre Technologies
Games Design and Development	Photonics
Green Electronics	Power Electronics
Find out more For more details about your course such as module information and course terreture visit	Power System Economics
	Power Transmission and Distribution
	Principles of Computer Graphics
	Programming Languages
	Quantum Devices and Technology
www.southampton.ac.uk/ecs/	Robotic Systems
ugcourses Or to have specific questions answered:	Secure Systems

	Signal Processing
	Silicon Photonics
	Simulation
	System on Chip
	VLSIDesign
	WebScience
cs, and	Web Technology
	Wireless and Mobile Networks
hines	Wireless and Optical Communications
	You can also choose from options offered elsewhere in the Universit

Sensors

iversity ntrepreneurship, Law, Management, Mathematics and Modern Languages. As part of its Flexible Learning Programme, the University has recently developed a range of interdisciplinary modules that also allow you to study subjects such as American Democracy, Gender and Society, Human Origins, The Living Earth, Philosophy of Science, or Twentieth Century Music.

Some modules are only available to specific programmes. Full details for each programme can be found on our website.

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SUMMER TASTER **COURSES** 26 - 30 July 2021

Find out more: www.taster.ecs.soton.ac.uk

Our popular Summer Taster Courses are a great way to find out about sector is right for you.

If you love maths, technology or science, these one-week residential courses will enable you to apply your skills to either Biomedical Electronic Engineering or Electronic Engineering and Computer Science. Working in groups, you will investigate and design solutions to real-world problems in our state-of-the-art undergraduate labs.

You will have the opportunity to live life as a university student and enjoy a busy programme:

- \rightarrow Try your hand at real experiments in our state-of-the-art laboratories
- \rightarrow Learn about our teaching and research from our globally renowned lecturers
- \rightarrow Get to know our current
- \rightarrow Enjoy social events and meet fellow students
- \rightarrow Experience life on campus and in our halls of residence
- → Meet leading employers at our Taster Course Careers Fair

44 Very informative and fun, and helped me figure out what I would like to study at university."

Siân

Taster course attendee

MODUL Ē

T:+44(0)238059 9699

Or to have specific questions answered:

E: enquiry@southampton.ac.uk

DEGREES WITH INDUSTRIAL EXPERIENCE

Enhance your employability with an Industrial Experience Year, an additional year-long paid placement with one of our recognised partner companies.

A year in industry – sometimes known as a placement, or sandwich year – is a great way to give you a competitive edge among graduate recruiters by showing you can relate your academic skills and knowledge to contemporary industrial practice.

KEY FEATURES

- \rightarrow The year in industry is taken after year two or year three
- \rightarrow You will be provided with advice and guidance by the University to help you secure your placement
- \rightarrow You will continue to have the support of the University during your placement with regular contact between you and the ECS team
- → You will benefit from a reduced fee of 20 per centof the standard tuition fee and receive a salary from the company during your placement year
- → Your successful placement will be included on your Degree Certificate
- ightarrow You will remain enrolled as a student during the year, with access to the usual University services, benefits and support
- \rightarrow The Placement Year is assessed by academics and industry experts via an individual reflective report and a presentation to staff and peers

INDUSTRIAL PLACEMENT YEAR

H611 MEng Aerospace	HH62 MEng Electrical
Electronic Engineering with	Engineering with Industrial
Industrial Studies Page 25	Studies Page 21
B901 MEng Biomedical	HH60 MEng Electrical and
Electronic Engineering with	Electronic Engineering with
Industrial Studies Page 27	Industrial Studies Page 23
10II MEng Computer	HH61 MEng Electronic
Science with Industrial Studies	Engineering with Industrial
Page 13	Studies Page 29
II30 MEng Software	H36H MEng Mechatronic
Engineering with Industrial	Engineering with Industrial
Studies Page 17	Studies Page 37

Applications for these programmes should be made through the Universities and Colleges Admissions Service(UCAS)



Adrian

I have enjoyed being part of a team, solving problems, and improving car manufacturing efficiency. I really appreciated that I was given my own projects to work on. I have been able to visualise 3D models of the assembly line at the Oxford MINI plant. This has been a challenging but exciting project, and I am looking forward to integrating real-time data into this simulation to represent processes taking part on the real production line.

Adrian Kraft MEng Electronic Engineering with Industrial Studies, third year Placement, BMW MINI

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 wanted to do engineering, but didn't have maths A level, so I worked with the engineering staff at Southampton to do some pre-testing and then applied to do a Foundation Year. The course gave me all the maths and engineering basics to take me beyond A level standard in a really structured way. It opened up the opportunity to do any of the fantastic range of engineering degrees on offer at Southampton, and that flexibility really appealed to me."

Amal Elhawrani

BEng Electromechanical Engineering, 2015 Graduate Electrical and Power Engineer, London Underground

Why take the Foundation Year?

This one-year full-time course is integrated with a further three-, fouror 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 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 will take seven core modules:

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

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 Biomedical Electronic Engineering with Foundation Year H1H6 | four years

MEng Biomedical Electronic Engineering with Foundation Year HH16 | five years

BSc Computer Science with Foundation Year I100 | four years

MEng Computer Science with Foundation Year

BEng Electrical and Electronic Engineering with Foundation Year H604 | four years

MEng Electrical and Electronic Engineering with Foundation Year H605 | five years

Key information

Typical offers require the following A levels: ABB. Pass in the practical

where applicable **IB:** 32 points **BTEC Level 3 National Extended Diploma:** (RQF) DDD **Selection process:** UCAS application; additional information may be required, such as a mathematics test and/or

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

BEng Electrical Engineering with Foundation Year

H621 | four years MEng Electrical Engineering with

Foundation Year H622 | five years

BEng Electronic Engineering with Foundation Year H612 | four years

MEng Electronic Engineering with Foundation Year H613 | five years

BEng Software Engineering with Foundation Year I300 | four years

MEng Software Engineering with Foundation Year 1303 | five years

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WORLD-CLASS RESEARCH

"I had so many highlights during my time at Southampton, but one of my proudest accomplishments was graduating in summer 2013 with a first class honours in BEng Electronic Engineering. I loved it so much that I stayed on and did my PhD.

My PhD was funded through the EU's seventh Framework Programme; I was part of an impactful 16-partner consortium consisting of well-known industrial, academic and research organisations across the EU. It was the prestige of Southampton's Nanotechnology and Nanoelectronics Research Group that attracted this project and funding opportunity. Guided by my supervisor, I performed experiments in the cleanroom and achieved novel results, which I presented in international conferences, published in multiple journals and a book chapter. Through networking and working with partners on the project, I also gained a good understanding of public funded projects and consortium roles.

During my PhD, I took on various responsibilities within the department and the university, including lead student ambassador, head guide for the department's recruitment and admissions, workshop leader for public engagement and outreach activities and demonstrator in various modules. In these roles, I developed transferrable skills including leadership, communication, problem-solving and time management.

This all helped me in securing my challenging but rewarding role at TWI where I am responsible for delivering bids for public funding, including programmes such as Innovate UK and European Commission's Horizon 2020. I work closely with researchers and engineers at our research institute to develop the project concept, fit to the appropriate call, build a consortium of UK and European partners, budget and resources planning for multi-million pound projects, liaise with industrial and research partners for the preparation of public funding proposals and manage experienced writers to deliver winning proposals."

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Southampton has one of the premier cleanrooms in Europe, which enabled me to carry out cutting-edge experiments and generate novel results. The University also has world-leading researchers and academics to guide the way for students and an international reputation"

Xiaoqing (Sally) Shi

BEng Electronic Engineering, 2013 PhD in Electronic and Electrical Engineering, 2018 Innovation Project Leader, Technology Innovation Management Team in the UK for the volume and quality of Electrical and Electronic Engineering research*



of our **Computer Science** research impact is recognised as world-leading or internationally excellent*



World-leading research facilities include 730m² Cleanroom complex for nanoelectronics and photonics fabrication

YOUR CAREER

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

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 mean 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.

ECS provides a dedicated

programme of employer-led

events and workshops on campus

Showcase your potential

- → Take advantage of our commercial partnerships with more than 150 ECS-affiliated companies via work placements, internships and volunteering.
- → Network with top employers at our annual Engineering and Technology Careers fair, which attracted around 75 leading companies in 2020.
- → Keep up to date with the latest news of our ECS Careers Hub, which includes a database of current opportunities.
- Build your entrepreneurial skills by engaging with Future Worlds, our on-campus startup incubator.
- → Specialise further with one of our postgraduate courses and gain a more in-depth knowledge of your subject to realise your ambitions.
- → Gather evidence of your achievements through our programme of personal development to complement your academic study.

65 75 employer-led events employers

> Our annual Engineering and Technology careers fair offers the opportunity to network with employers

Southampton graduates are successfully employed at high-profile organisations such as: Accenture American Express Apple Amazon Arm BAE Systems Bloomberg BBC BT

Cambridge Consultar Carnival China Telecoms Cisco Deutsche Bank Dyson Facebook FactSet Goldman Sachs Google IBM Intel Jaguar Land Rover J P Morgan McLaren Microsoft Morgan Stanley Netcraft Northrop Grumman Rolls-Royce Samsung Sony STFC UKAFA

150

partner companies

Through our network of

partner companies we

source industry-relevant

graduate roles, work

placements and internships

Assemption that attractures for characterizing the directional coupling. He will length straight exceedable and the RC bend, we are also to calculate the NC insertion line, as well as the line Yean, and analysis could inductionly which we can then relate to the estimates rate and recultant her spectral mean.

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The second

I was awarded a UKESF scholarship by Moortec Semiconductor Ltd where I spent three months over my summer break. During my time there, I was trusted with developing a product that would not only see the market in a few months' time, but also future work would be built on it.

I made some great industry contacts on my placement, everyone went out of their way to make me feel comfortable and enjoy my time with the company. An invaluable experience, I would definitely recommend this to other students."

Stylianos Antonios Balalis MEng Electronic Engineering, final year Summer Placement student, Moortec Semiconductor Ltd Find out more: www.ecs.soton.ac.uk careers

WORKING TOWARDS YOUR FUTURE

Preparing you for life beyond university goes hand in hand with your studies at Southampton. Through our range of entrepreneurship services, our students have the chance to develop the professional enterprise skills needed to make their mark on the world.

At Southampton we recognise that getting an excellent degree goes way beyond the lecture theatre, it is about hands-on experience too. From business incubators to student societies, enterprise degree modules to careers support, the University of Southampton provides a wealth of opportunities to help launch the entrepreneur within you.

Electronics and Computer Science is home to some of the most talented innovators in the world. From students to professors, some of these aspiring entrepreneurs take their ideas directly to market by creating startups. Future Worlds is a startup accelerator on campus that matches their passion and drive with a determination to help them at every step of their entrepreneurial journey.

founded by Daniel Martinho-Corbishley, an MEng Computer Science graduate who progressed onto a PhD in machine learning, and fellow PhD researcher Jaime Lomeli The tech startup was launched after the team pitched their idea at an on-campus Dragons' Den style investment competition. With mentoring and incubator support from Future Worlds, they went on to exhibit at the Consumer Electronics Show (CES) in Las Vegas in 2018 and completed a £100,000 seed investment deal to progress their business.

One such venture is Aura Vision.

In 2020 Aura Vision was announced as one of the top 50 retail tech start-ups operating globally. The report was published by RWRC – home of Retail Week and World Retail Congress.

Find out more: www.ecs.soton.ac.uk/entrepreneurship



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.

Some of the many benefits of

→ a friendly student community and

utility bills, internet, contents insurance and, for halls in

great transport links with our

campuses

social spaces

on all sites

competitive prices (which include

Southampton, a Unilink bus pass)

 \rightarrow on-site facilities including common

rooms, launderettes, study and

 \rightarrow year-round, 24-hour support from

→ catered and self-catered options

our Student Life team

 \rightarrow 24-hour security and CCTV

living in halls include:

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.

FEBRUARY/ **MARCH 2021**

Accommodation application opens and goes live online

APPLICATION TIMELINE

before 31 May 2021

JUNE/JULY 2021 Allocation and offer of

rooms starts for deferred New students must have applied for accommodation students and students with unconditional offers, who have before this date to be eligible applied for accommodation for our accommodation guarantee **MID AUGUST** 2021 After A level results.

1 AUGUST 2021

allocation of rooms

to all students begins

25-26 **SEPTEMBER** 2021 Arrivals weekend

MID

2021

Allocation of

SEPTEMBER

rooms completed

*Our guarantee to you

Stav in one of ove 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.





YOUR STUDENT LIFE

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

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, cuttingedge 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.

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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.

Southampton (NOCS), is one of the world's leading research centres for

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.

the study of ocean and Earth science.

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.





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 guidditch.
- → 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
- \rightarrow Try out journalism with one of the Union's award-winning magazines, Wessex Scene or The Edge.

- → 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.
- \rightarrow 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.
- \rightarrow 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.
- o5 Westquay shopping centre.

Find out more:



OUR INTERNATIONAL COMMUNITY

Join our vibrant and diverse international student community; study, make lifelong friendships, and socialise on the south coast of the UK.

We welcome students from over 130 countries, including around 7,450 EU and international students.

Support and advice

Living and learning in a different country is a big step, so we ensure that our international students have all the support they need.

From ensuring a straightforward entry process, to offering attractive scholarships to eligible applicants, we can help you settle in to your new life in the UK.

Our International Office

Wherever you are in the world, it is easy to discover how to become a part of our community. Our friendly International Office staff regularly travel overseas and within the UK to meet potential students at exhibitions and events.

We are always happy to help and can answer any questions you may have about living and studying here.

Welcome Programme

Every September, we arrange a free Welcome Programme for international and EU students, which is designed to help you settle into life in the UK and at the University before your studies begin. Meet other undergraduate students, attend talks, explore our campuses and the city, and more.

Meet and Greet

We organise a free Meet and Greet service for all new international and EU students in September each year. Our representatives meet you at Heathrow or Gatwick Airport and transport you directly to our campuses.

You can register for the Welcome Programme and Meet and Greet service from July.

English language requirements and support

You will need to demonstrate that you have sufficient knowledge of the English language in order to be able to benefit from all academic activities at the University.

For details about English language requirements for our courses, visit our website.

I like that there is grea

diversity in Southampton an

meet people from different

backgrounds. This makes it

easier to make friends and

BEng Biomedical Electronic Engine

I feel more at home."

Alexandra Saliga

third year

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We also offer a wide range of support programmes to help you prepare for learning in a British academic environment and meet your English language requirements. Our presessional courses help you prepare before you start your course, and there is ongoing academic English language support you can access while you study.

International Student Accommodation Guarantee

If you are an international student, we guarantee you a place in University accommodation, as long as you fulfil the full criteria of the guarantee. This includes applying before 1 August each year, and continuing to be classified as international for fees purposes.

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Explore our University from home

Virtual Open Day: www.southampton.ac.uk/sb/ virtualopenday

Visas

Before you join us, you will need to find out about the UK's immigration procedures well in advance of your arrival in the UK.

Our specialist visas team can help advise and support you; you can find out more on our helpful website.

Fees

We offer fixed fees for international students, so you pay the same annual fee for the duration of your course. We also make it easy to pay your fees online, or from your sponsor or funder.

More information on fees and funding can be found on our website.

01 Enjoy the buzz of events on Highfield Campus.

- 02 Meet with friends between lectures on Highfield Campus.
- 03 Buy fresh food at the weekly market on Highfield Campus.
- 04 Have fun at the silent disco at the Freshers' Ball.



APPLYING AND FUNDING

How and when to apply

- → Applications should be submitted via UCAS (www.ucas.com).
- → Our institution code is S27 and our code name is SOTON.
- → The applications open in early September.
- → The deadline for medicine is 15 October.
- → 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



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 in Engineering and Physical Sciences, and Environmental and Life Sciences: £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 non-clinical 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.***

Scholarships in ECS

If you identify as female and are interested in studying at ECS, are one of our highest achieving applicants, or have attended an ECS Summer Taster Course, you may be eligible for one of our scholarships up to a value of £3,000.

Find out more at www.ecs.soton. ac.uk/ scholarships

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 selfdirected 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

HOW TO FIND US

are never too far from Southampton.

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

HOW TO FIND US



University of Southampton

University Road, Southampton SO171BJ, UK T:+44(0)2380595000 www.southampton.ac.uk

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Find out more:

SOUTHA

Belfast

Manchester •

• Edinburgh

London

SOUTHAMPTON

www.southampton.ac.uk/sb/ campuses

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

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:

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 than with theme (fees compared to heavier to the program).

them with others (for example, because too few students apply to join the programme for it to be viable)

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

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 have not do **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 to 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

No 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

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/

www.calendar.soton.ac.uk/section 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

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

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

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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. Published and produced by Communications and Marketing February 2020 Photographs courtesy of Jon Banfield, and staff and students of the University Design and artwork by WAXsii