Ranked

#1

in Scotland for
General Engineering

(Complete University Guide 2019-20)
Welcome

From the moment you join our vibrant and friendly community we are committed to ensuring that your experience is excellent. We take pride in the diversity and quality of our teaching and research, which are world renowned.

You are part of a team that has access to state of the art facilities to underpin the teaching environment and to develop future techniques and approaches in practical applications and research. We offer a suite of undergraduate and postgraduate programmes that reflect your study aspirations and needs, within a framework of flexibility.

Our exciting curriculum enables a provision of transferable skills, which explains why University of Aberdeen graduates have some of the highest UK statistics in employability. There has never been a better time to study engineering. We are moving to some very exciting new industries and innovations all of which involve each discipline in engineering.

I very much hope you enjoy your time here at the University and learn more about what we have to offer both online and through the prospectus. Please contact us for specific details and we will be delighted to host a visit, to let you see first-hand why you should select to join us in Aberdeen. Meet our students and our graduates and then become part of our team.

Professor Igor Guz
Head of School
Why Study Engineering?

Engineering is a broad subject, covering many different types of activities across various fields of human endeavour. While engineers work in many different industries, from aerospace to software, from automotive to telecommunications, from finance to pharmaceuticals and from medicine to oil and gas, all engineers use creativity to design solutions to the problems we face in the world today.

Engineering is one of the most satisfying professions. You get results and, at the end of the day, you have the job satisfaction of being able to see your work in action.

Engineering is an intellectually demanding profession, mainly because of the wide range of skills you need to deploy. You are expected to be good at mathematics, to have a sound grasp of basic sciences, to be inventive and creative, to be able to sell your ideas to clients and colleagues and, in due course, to organise and lead fellow professionals.

“Scientists study the world as it is, engineers create the world that never has been”

Theodore von Kármán
“A key message I’d give to people considering an engineering career is “go for it”. If anyone else is surprised by your decision, don’t let that stop you! If you chose engineering because it’s what you want to do, you won’t regret it.

Faye Campbell
MEng Electrical and Electronic Engineering, graduated 2015
Student Teams

**TAU Racing**

Every year, Team Aberdeen University Racing (TAU Racing) design, develop, build and market a single seat race car to compete in Formula Student, an international race organised by the Institution of Mechanical Engineers (IMechE) held at Silverstone, which attracts entries from universities around the world.

TAU Racing is a great opportunity for students in all disciplines to apply engineering methods learned in class to a real life engineering project, while also developing their team working, project management and communication skills.

www.tauracing.com

**PrototAU**

Team PrototAU consist of students from engineering and business, who develop and build a car to compete in the Shell Eco-Marathon (Prototype class). This competition challenges students from around the world to design, build and test energy-efficient cars, pushing the boundaries of what is technically possible. Students take their designs to the track to see which vehicle can go furthest on the least amount of fuel.
Your Learning Experience

General Engineering

The School of Engineering follows a general engineering model, which means all engineering students study the basic underpinning concepts and fundamentals of engineering during their first two years before specialising in one of the five disciplines in Year 3.

- Chemical Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Mechanical Engineering
- Petroleum Engineering

There are several benefits to the general engineering approach. Firstly, students can use the first two years of their degree to make an informed decision about what area of engineering to specialise in, while studying the fundamental elements of Chemical, Civil, Electrical/Electronic, Mechanical and Petroleum.

Secondly, students benefit from a broad-based engineering education and develop the wider range of expertise and skills that are in demand from employers today.

Thirdly, the broader expertise gained through the general engineering approach is particularly useful later in your career, when leading teams of engineers from across different specialisms.

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<td>Year 5 (MEng)</td>
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<td>Honours (Discipline Specialism)</td>
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Dr Euan Bain
Director of Undergraduate Teaching

Prof Ana Ivanovic
Director of Student Recruitment and Internationalisation
**MEng and BEng**

After the first two years, you have the opportunity to pursue the 5 year Masters of Engineering (MEng) or 4 year Bachelor of Engineering (BEng) degree in your chosen discipline. Our 4-year BEng programmes are accredited as fully meeting the educational requirements for IEng and partially meeting the educational requirements for CEng.

Design is a critical component of all our degrees and will feature throughout. The design exercises in years 3, 4 and 5 will use that knowledge to allow you to work on real-life projects that are highly relevant to today’s industry.

**Optional Courses**

Students also choose optional courses alongside their core engineering courses. Optional courses are designed to give students a greater breadth of learning and to improve employability by further developing your other skills and knowledge. For example, you can choose courses in Languages, Mathematics, Sciences, Computing, Social Sciences, Management, Arts and Music, subject to normal timetabling restrictions.

**Lectures and Laboratories**

Each Engineering programme is taught through a combination of lectures, tutorials and laboratory (lab) classes. Lectures are held in lecture halls and are quite different from the kind of classes you will be used to from school. In addition, you will attend labs where you will conduct experiments and receive practical demonstrations of what you have learned in your lectures. Tutorials are run as small classes where students work on example problems with support from their tutors.

**Work Experience**

Engineering Work Experience is a new 15 credit 2nd year course designed by the School of Engineering in partnership with the University’s Careers Service to develop students’ work readiness. The course embeds careers education in the academic curriculum and provides students with a work-related learning experience through employer-hosted consultancy-style projects.

**Field Trips**

Engineering students also benefit from the University’s location in Energy Capital of Europe through numerous field trips and site visits to local companies. Field trips are especially valuable as they allow students to observe how the theory learned in lectures is applied in industry and also because you can learn more about different engineering careers from the industry professionals that you meet.

**Personal Tutors**

Each student is allocated a Personal Tutor in first year. Your tutor will meet with you several times throughout each year of study, either individually, or in groups. The role of the tutor is to provide pastoral support, to help ensure that you gain as much as you can from your time at university and to guide you towards other support services when necessary.
Discipline Leaders

Dr Marcus Campbell Bannerman
Chemical Engineering

Dr Paul Davidson
Civil Engineering

Dr Sumeet Aphale
Electrical and Electronic Engineering

Dr Peter Dunning
Mechanical Engineering

Dr Hossein Hamidi
Petroleum Engineering
Degree programmes

The School of Engineering offers five accredited undergraduate programmes that can be studied at either MEng or BEng level. Our General Engineering approach ensures that our programmes are flexible, giving you knowledge and skills in your first two years that will allow you to specialise from your third year.

Chemical Engineering

Need to design a process to make a new product? Need to make your existing process more energy efficient? Need to analyse if your existing process can increase production or find out where the bottleneck in your process is? Need all of this done whilst considering economics, environmental impact and safety? You need a chemical engineer!

Chemical engineers are sought after across a broad spectrum of industries. Bioenergy to beer, catalysis to clothing, chemicals to consumer goods, education to energy, finance to fermentation, foods to fuels, management to mining, oil to ore, paper to pharmaceuticals, waste to water; chemical engineers are everywhere and have an impact on most of the things we use and do.

By studying chemical engineering with us you’ll learn from a team of engineers with wide-ranging interest and expertise and have contact with both academics and practicing engineers. You’ll be able to interact with industry from the moment you begin your degree. You’ll benefit from our newly refurbished chemical engineering teaching and research laboratories and have access to industry-standard software. Come here to study chemical engineering, go anywhere.

MEng Chemical Engineering (5 years)
BEng Chemical Engineering (4 years)
Civil Engineering

Civil engineering is all about our environment. Civil engineers design, build and maintain our roads, railways, airports, dams, hospitals, schools and sports stadiums. They also design water supply systems and flood protection schemes. They keep our infrastructure working effectively and adapt it to meet challenges like population growth or climate change.

Our teaching is supported by our excellent workshop and laboratories, with state-of-the-art equipment, including some of Scotland’s very best hydraulic equipment.

Choose Civil Engineering to make a lasting, positive improvement to society through sustainable design and the protection of the natural environment on land or at sea.

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<th>Programme</th>
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<tr>
<td>MEng Civil Engineering</td>
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<td>MEng Civil Engineering with Subsea Technology</td>
<td>5 years</td>
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<tr>
<td>MEng Civil and Environmental Engineering</td>
<td>5 years</td>
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<tr>
<td>MEng Civil and Structural Engineering</td>
<td>5 years</td>
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<tr>
<td>BEng Civil Engineering</td>
<td>4 years</td>
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<tr>
<td>BEng Civil and Environmental Engineering</td>
<td>4 years</td>
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<tr>
<td>BEng Civil and Structural Engineering</td>
<td>4 years</td>
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What our graduates say

“As an engineer, I face technical challenges constantly. The University of Aberdeen equipped me with the foundations to prepare me for real-life applications of the theoretical knowledge gained through the degree programme.”

Anthony Ope Ajanaku
BEng Chemical Engineering
Patent Examiner Assistant, European Patent Office (EPO), Germany, graduated 2013

“My advice to future engineering students is get involved in extracurricular activities. This is an amazing chance to broaden not only your knowledge in your own field and to network with others but also develop your creativity, problem solving, time management, financial management, soft skills and managing people – these are crucial skills once you are out there in the professional world.”

Sandra Magdalena Poloczek
MEng Civil and Environmental Engineering, Building Information Modelling (BIM) Engineer, Ed. Züblin AG, Germany, graduated 2014

“I chose the University of Aberdeen because first of all Aberdeen is known as an oil and gas city, and I was planning to study petroleum engineering. There are many companies located within the city that have invested their research to the University and provide grants and internship opportunities to students.”

Noor Aqilah Ibrahim
National Oilwell Varco (NOV), Malaysia, MEng Petroleum Engineering, graduated 2014

“At Aberdeen, I gained confidence in the understanding of maths, specifically trigonometry. I can produce high quality reports thanks to all the coursework. My advice to prospective students would be to get a summer placement at the end of third year and then keep going back each summer to secure yourself a job post graduation”

Charlie Gomer
MEng Civil Engineering
Civil Engineer, J. Murphy & Sons Limited, UK, graduated 2017
“I chose the University of Aberdeen because of its reputation for having one of the best Mechanical Engineering degree programmes in the country and its unparalleled strong links to the oil and gas industry. I particularly enjoyed the stress analysis, fluid mechanics and advanced materials courses while studying for my degree. These courses have been and are the most beneficial to the engineering aspects of my career to date.”

Emeka Oti
Director, Strata Search Limited, Nigeria
BEng Mechanical Engineering (with Materials), graduated 2007

“I chose this course because I needed to stand out professionally from the rest of the competition and as the University of Aberdeen is considered one of the top universities to study any oil and gas related degree, I believe this was one of the best decisions I have ever made.”

Jorge Verdejo Caraveo
BEng Petroleum Engineering Business Evaluation and Development/Reservoir Engineer, PetroBal, Mexico, graduated 2014

“I was passionate about mechanical engineering at a young age and after doing my research learnt that University of Aberdeen was one of the best places to study it. In addition to its School of Engineering, University of Aberdeen has some incredible world-class facilities that gave me the opportunity to experience student life to the fullest. It was definitely one of the life choices that I am still proud of till date.”

Demi Ademuyewo
Assistant Design Manager, Costain, UK
BEng Mechanical Engineering, graduated 2013

“This degree programme helped me develop technical mind-set, improve problem solving and showed the importance of team working when tackling group assignments.” I really enjoyed the Design of Mechanical Elements course as well as working on my MEng Individual Project. These two parts of the programme are the ones that required you to combine the theory from other courses in order to deliver well-designed projects.”

Tomas Gaizevskis
MEng Mechanical Engineering Graduate Mechanical Engineer, Churchill Drilling Tools, Aberdeen, graduated 2017
We rely on electrical and electronic engineers for almost everything we do – from small electrical devices to high voltage electrical power generation systems.

You will get to use your imagination, creativity and knowledge to supply and improve upon the complex systems needed by today’s society. You might design machines that supply power to our homes, digital control systems for aircraft or put an entire computer system on a single silicon chip. Electrical and electronic engineers will be vital to future technologies such as driverless vehicles, robotics, medical equipment and the next generation of mobile data transmission.

We have labs dedicated to satellite communications, lasers and computer-aided design, as well as many others.

Choose Electrical and Electronic Engineering to understand and develop the key technologies we now take for granted in our everyday lives.

- MEng Electrical and Electronic Engineering (5 years)
- MEng Electrical and Electronic with Renewable Energy (5 years)
- MEng Electronic and Software Engineering (5 years)
- BEng Electrical and Electronic Engineering (4 years)
- BEng Electronic and Software Engineering (4 years)
Mechanical Engineering

Virtually every product in modern life has, at some point, had input from a mechanical engineer. It is not surprising, therefore, that mechanical engineering is widely regarded as one of the most diverse engineering disciplines.

Mechanical engineers develop everything that moves or has moving parts – from spacecraft to racing cars, from robotics to mechanical hearts and artificial limbs, from wind turbines to oil and gas exploration technologies.

Choose mechanical engineering if you’ve ever found yourself fascinated by how machines work and how the use of machinery can make previously impossible things become possible.

MEng Mechanical Engineering (5 years)
MEng Mechanical and Electrical Engineering (5 years)
MEng Mechanical Engineering with Management (5 years)
MEng Mechanical Engineering with Subsea Technology (5 years)
BEng Mechanical Engineering (4 years)
BEng Mechanical and Electrical Engineering (4 years)
BEng Mechanical with Oil and Gas Studies (4 years)

Aberdeen Engineering and Technology graduates earn £17,679 per year more than the sector average five years after graduation (UK Department of Education, 2018)
Petroleum Engineering

Petroleum engineers are concerned with the design, development and promotion of front-end engineering applications and technologies required in the exploration, drilling, production and management of oil and gas reservoirs both onshore and offshore, whilst giving due consideration to health, safety and environment. They are also involved in the design and development of technologies and processes associated with energy transition, e.g. carbon capture and storage and geothermal energy extraction. They work with geologists and other engineers to ensure safe recovery, processing, transportation, transmission, and utilisation of petroleum products often in very challenging environments.

In addition to the technical petroleum engineering skills, petroleum engineers learn and develop skills in project management, project economics and environmental impact assessment. It is not surprising therefore that petroleum engineers are highly sought after by major energy and non-energy companies around the world, and are amongst the best paid compared to other engineering disciplines.

Aberdeen is based in the heart of the North Sea energy industry and is an International Centre of Excellence for exploration and production of oil and gas.

Choose Petroleum Engineering at the University of Aberdeen to draw upon our well-established expertise in engineering aspects of exploration and exploitation of hydrocarbon to meet the industry challenges of the future.

MEng Petroleum Engineering (5 years)
BEng Petroleum Engineering (4 years)

Ranked

for Petroleum Engineering

(CEOWorld Magazine 2017)
TOP 10
UK university to study Engineering
(The Telegraph 2018)
As a University of Aberdeen student, you can join any number of clubs and societies depending on your hobbies or interests.

There are a number of societies directly related to engineering, where you can meet fellow engineering students and develop your interests and new skills, including:

- Chemical Engineering Society
- Energy Society
- Civil Engineering Society
- Electrical & Electronic Engineering Society
- Engineering Society
- Engineers without Borders
- Society of Petroleum Engineers
- TAU Racing Society
- Aberdeen University Women in Science and Engineering (AUWISE)
- Robogals
- ProtoTAU
- Aerospace Engineering Society

www.ausa.org.uk/
Study abroad

Studying abroad is a great way to gain international experience while earning your degree.

The School of Engineering has a number of partnerships with leading universities through the Study Abroad and Erasmus+ scheme.

Study a semester at a trusted partner university in Europe, the USA, Singapore, Hong Kong and elsewhere. You’ll earn credits toward your University of Aberdeen degree and get to experience living in another country.

abdn.ac.uk/go-abroad
RANKED 4th in the UK, 1st in Scotland for graduate salaries five years after graduation

Department for Education Longitudinal Education Outcomes survey, 2019
School of Engineering

Careers and employability

One of the great advantages of having a degree from the University of Aberdeen is that it provides you with a broad range of skills to offer future employers.

Our dedicated Careers Service exists to give you everything you need for future employment. Beginning with a one-to-one appointment with one of our Careers Officers, you will benefit from a range of resources, including our careers library, mentoring scheme, online professional skills courses, the Leadership Academy and a range of on-campus events led by industry, including fairs, workshops and presentations.

Within the School you will also have numerous opportunities to engage with employers and our optional work placement module will allow you to gain first-hand industrial experience as part of your degree.

All Engineering undergraduate degrees are accredited by at least one major professional engineering institution, giving you your first step to achieving Chartered Engineer status. Being a Chartered Engineer can lead to improved career prospects, higher earning potential and an international recognition of your skills.

More than 85% of Engineering graduates were either in employment or undertaking further study within six months, including 100% of MEng Civil Engineering students and 92.3% of MEng Mechanical Engineering students (most recent Destination of Leavers from Higher Education report, HESA 2016).

Graduates went on to work at a huge range of organisations, including Network Rail, Scottish and Southern Energy, Shell, the Ministry of Defence, ConocoPhillips, Talisman Sinopec, Cisco, Goldman Sachs, KPMG, PwC, Jaguar LandRover and BAE Systems.

TOP

10

in the UK for General Engineering graduate employability
(Complete University Guide 2019-20)
10 reasons to choose Aberdeen

01 The academic strength you would expect from a 500 year old university – yet right at the forefront for careers in the 21st century.
A thriving, cosmopolitan community with students from 120 countries set within a beautiful, historic campus that has seen five Nobel Prizes.

02 Degrees which are recognised and respected worldwide
Unique programme options with professional accreditation, industrial placements, plus the opportunity to study abroad.

03 The very best learning resources
We pride ourselves on providing state-of-the-art learning resources for our students. Computing and library facilities are geared towards your needs and we are especially proud of our exceptional museums and special collections.

04 Choice and flexibility
It’s your degree and we believe it should be planned around you, with the freedom to plan your own programme of study from a wide range of options.

05 Opportunities to develop yourself and your interests
Not only academic qualifications to rival the best, but also personal, communication and teamwork skills to make you an all-round achiever in whatever you choose to do. We boast over 150 clubs and societies for students to join and offer excellent on-campus sports facilities.

06 A proven track record for employment and the best headstart your career can get
Our experience and connections can help secure that all-important first step on the ladder to a successful career. 85% of University of Aberdeen Engineering students enter directly into good jobs, research posts or further study within six months of graduating.

07 A supportive community
A self-contained friendly campus in a friendly city; we will do everything we can to help you quickly feel at home. Our support services rank with the best in the UK and we aim to make sure, right from the start, that you have access to any guidance you might need – academic, personal, medical or financial.
We’re on the map
Aberdeen is probably closer than you think. Cheap and regular air, rail and bus connections will get you around Scotland, the UK and further afield in no time.

A buzzing, friendly city that has it all
Aberdeen is everything a student city should be and more! Historic, international, fashionable and friendly, Aberdeen is the perfect place to live and study. Aberdeen has also been voted the best place to be a student in the UK by a leading accommodation website.

First class accommodation
All new students are guaranteed a place in student accommodation, either on the campus or close by – so no need to set the alarm too early. All students will also have access to our state-of-the-art gym facilities at Aberdeen Sports Village.

Aberdeen is ranked Britain’s safest city
Provident Financial 2017