a lot of fun!

solves the most impactful of our problems in the world

As engineers, we are constantly changing the world with inventions and solutions that affect everyone's lives.

We get to dream up all the coolest gadgets, then we actually make them.

I am still learning everyday about what makes the world tick, like how television screens make an image or how air bags know when to inflate.

We use the materials that surround us in the world to communicate long distances or visualize an atom, which sounds a lot like magic.

Engineers are like the wizards of our society; everyone wants them to fix their problems, and no one is quite sure how they came up with the solution.

Being an engineer is fun because you get to use magic to create things every day. One day, you'll make something that can help change the world

**Job Satisfaction**  
It's important to find a career that you enjoy. After all, you'll probably be spending eight hours or more a day, five days a week, at your job. Engineering can provide a satisfying field of work.

Those that are drawn to engineering or technology will also find enjoyment and satisfaction throughout their career, as Richard Brandon, CMO/head of strategy at MLL Telecom highlights.

"[Those drawn to technology] probably do so because they find the subject interesting, and they will find employment in engineering and technology will continue to be interesting for the rest of their careers," he says. "It's an area that is guaranteed to continue to change and evolve so that, in a way, even experienced professionals are continually learning and refreshing their knowledge. For many of us in the field it's this constant change that is so appealing."

**Variety of Career Opportunities**  
From electrical and computer engineering to environmental and biomedical engineering, an engineering degree offers a wide range of career possibilities. But the majority of today's college graduates will have more than one career during their work life, and engineering can provide a strong foundation for almost any one of them.

**Potential to Benefit Society**  
As an engineer, you can choose to work on projects that benefit society, such as cleaning up the environment, developing prosthetic aids for disabled persons, developing clean and efficient transportation systems, finding new sources of energy, alleviating the world's hunger problems, and increasing the standard of living in underdeveloped countries.  
**Challenging Work**  
There is no single answer, no answer in the back of the book, no professor to tell you that you are right or wrong. You must devise a solution and persuade others that your solution is the best one.

**Intellectual Development**  
An engineering education will "exercise" your brain, developing your ability to think logically and to solve problems. These are skills that will be valuable throughout your life – and not only when you are solving engineering problems.

**Creative Thinking**  
Engineering is by its very nature a creative profession. Because we are in a time of rapid social and technological changes, the need for engineers to think creatively is greater now than ever before. If you like to question, explore, invent, discover, and create, then engineering could be the ideal profession for you.

**Technological and Scientific Discovery**  
Do you know why golf balls have dimples on them, or why split-level houses experience more damage in earthquakes? An engineering education can help you answer these questions, and push you to ask new questions of your own.

**Financial Security**  
Engineering is a lucrative career. Engineering graduates receive the highest starting salary of any discipline.

**Prestige**  
Engineers help sustain our nation's international competitiveness, maintain our standard of living, ensure a strong national security, and protect public safety. As a member of such a respected profession, you will receive a high amount of prestige.

**Professional Environment**  
As an engineer, you will work in a professional environment in which you will be treated with respect, have a certain amount of freedom in choosing your work, and have the opportunity to learn and grow through both on-the-job training and formal training.

* "It is a great profession. There is the fascination of watching a figment of the imagination emerge through the aid of science to a plan on paper. Then it moves to realization in stone or metal or energy. Then it brings jobs and homes to men. Then it elevates the standards of living and adds to the comforts of life. That is the engineer's high privilege." [Read more](https://www.georgefox.edu/academics/undergrad/departments/engr/hhoover.html) about this engineer's George Fox connection.
* ***Herbert Hoover***31st president of the United States
* "Scientists investigate that which already is; engineers create that which has never been."
* ***Albert Einstein***

It is said that **engineering** is not just a degree, but a way of thinking. Even though the number of engineers in India has proliferated over recent years, the demand for good engineers has remained constant. An engineer should have curiosity and a bent of mind to discover something new. If you merely study science with the objective to score and do not find much interest in the experiments and the numerous applications possible through the formulas and concepts, it is unlikely that you would want to make a career in the same.

Good money, lots of variety, the chance to be part of a renowned group of professionals and always in demand - what's not to like about a career in engineering?

nuclear power is one such sector where engineering roles look set to be plentiful.

"Nuclear power will be a future growth area requiring engineering and technology graduates. EDF Energy alone is planning to build four new nuclear plants in the coming years and we are looking for all sorts of skills including - electrical, mechanical, civil and material engineering and maths, physics, chemistry and environmental science," highlights EDF Energy graduate recruitment manager Ranjini Sachin.

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**Why choose engineering?**

Good money, lots of variety, the chance to be part of a renowned group of professionals and always in demand - what's left?

Engineering and technology may not be the easiest subjects to get to grips with, but they continue to be in demand, and because they are challenging, those that work in them stand out from the crowd.

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Develop specialist and transferable skills

An engineering-based education also allows you exposure to various technical subjects and skill sets.

"[You] will be able to develop skills that are transferable to most industries such as problem solving, decision making, innovation, project management, team working and communication," says Tony Dearsley, Computer Forensics, Kroll Ontrack Legal Technologies. "[You] will also have the knowledge that [you] are contributing to a rapidly changing technological environment."

Good money and prospect-based benefits

The key benefits of choosing a career in engineering are both financial and prospect based. Financially, the starting salaries are among the best across all industry sectors.

"In many areas, the demand for well-qualified, skilled graduates outstrips supply, and businesses are struggling to find recruits for vacancies. New engineering graduates can expect to earn around £22,000, which is ahead of sectors sales, human resources and even finance," says Allan Pettman, UK managing director, Global Knowledge.

"From a prospect perspective, ICT and engineering are getting increased prominence in business circles – particularly in service based industries and strong rounded candidates can also expect to progress quickly within organisations," he continues.

These include environmental solutions, security, medical engineering and green power.

Green engineering is the most often cited example of an area that needs fresh blood, but this often conjures up images solely of wind turbines or solar power. In reality, there are opportunities throughout the power industry, looking at ways to increase energy efficiencies and develop other sustainable sources," says Professor Ken Grattan, Dean of the School of Engineering and Mathematical Sciences and the School of Informatics at City University London.

"Safety and security is another key area for growth, whether that be physical defenses or cyberwarfare," he continues. "Dealing with the world's aging population will also be a challenge for engineers over the coming years – from developing new healthcare technologies to creating the types of advanced robotics that we see in Japan, to help elderly citizens. A key skill is to be inter- and cross-disciplinary in approach - bringing to bear all of the requisite approaches to problem solving."

"High performance engineering is also another area growing rapidly in the UK," adds Alec Reader, director of NanoKTN. "Rolls Royce is based in the UK, UK manufacturers produce the wings for Airbuses, there's a huge demand for trained professionals in this area and this will continue to increase as technology becomes more and more advanced and the number of numbers will continue to increase."

So there you have it. If you're considering starting an engineering degree or apprenticeship now have a number of ways to answer the question why choose engineering? A good starting salary, great career prospects, employment security and a wide range of exciting areas to work in: why would you ever choose anything else?

Look around you. How much of what you see has been manufactured? Engineers are involved in the design and manufacture of (almost) everything from cars to computers, from web pages to widgets, from microchips to motorways. Many recent medical advances have been made as a result of work done by engineers: from brain scanners to the drug dispensers used by asthma sufferers. Engineers these days are also concerned with many important environmental and social issues: what is the best way to improve transportation and housing? How do you make recycling work efficiently?

If you want to be an informed member of society, able to understand modern technology as well as the infrastructure on which our society is built, then there can be no better training than that given to engineers.

Graduates of the Department have benefited from an education that enables them to make a real difference to the world outside while, at the same time, pursuing successful and rewarding careers.

# What do professional engineers do?

**Engineers make things happen. Most of today’s products and services have an engineering component, enabling us to enjoy longer, healthier, more comfortable and fulfilling lives.**

From the large-scale infrastructure of the physical environment we inhabit to the virtual environment of computing and information technology, from applied research to the world of elite sports – the work of engineers has a huge impact on our lives; enabling us to live longer, healthier and more comfortably.

### Biomedical Engineers

Biomedical engineers use their background in the engineering and medical fields to understand how the human body functions and why it sometimes fails. They work in a wide range of industries, hospitals, research facilities, as computer animators or in government regulatory agencies. Find out more about [Biomedical Engineering](http://www.des.auckland.ac.nz/en/about/ourdepartment/whatisbiomedicalengineering.html).

### Chemical Engineers

Chemical engineers are ‘big picture’ professionals involved in the design, research and development, construction and installation, and manufacturing and production processes of converting raw materials into valuable end-products for use in our modern, technological society. They work in the dairy and food industries, pharmaceuticals, biotechnologies, paper and pulp, petrochemical, energy processing and production, semiconductors and mineral processing sectors. Find out more about [Chemical and Material Engineering](http://www.ecm.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/why-study-chemical-and-materials-engineering.html).

### Civil Engineers

Civil engineers work on the planning, design, construction and maintenance of the things that make modern world that we inhabit possible; skyscrapers, motorways, bridges, tunnels and dams. Find out more about [Civil Engineering](http://www.cee.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/why-study-civil-and-environmental-engineering.html).

### Environmental Engineers

Environmental engineers develop structures, equipment and systems that provide practical solutions to the problems caused by increased consumption and waste, and threats to biodiversity. Find out more about [Environmental Engineering](http://www.cee.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/why-study-civil-and-environmental-engineering.html).

### Computer Systems Engineers

Computer systems engineers develop the software and hardware components that we depend on in our everyday lives; home automation, appliances, automobiles, factory processes, wireless and communication systems, mechatronics systems, instrumentation, embedded systems and nano-systems. Find out more about [Computer Systems Engineering](http://www.ece.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/be-hons-computer-systems-engineering.html).

### Electrical and Electronic Engineers

Electrical and electronic engineers design the equipment and systems that provide essential services to satisfy our high dependence on reliable power, communications and electronic systems; electric power generation, communications, wireless computing technologies, microprocessors, computer applications, and high power electronics. Find out more about [Electrical and Electronic Engineering](http://www.ece.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/be-hons-electrical-and-electronic-engineering.html).

### Engineering Science

Engineering scientists use mathematical models and considerable computer power to provide solutions to complex decision problems faced by industrial, medical, service and business sectors. Find out more about [Engineering Science](http://www.des.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/why-study-engineering-science.html).

### Mechanical Engineers

Mechanical engineers use science and technology to develop the machines that are essential for everyday life through design, production and operation of mechanical devices, machinery, transportation and energy management.  
Find out more about [Mechanical Engineering](http://www.mech.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/whystudymechanicalengineering.html).

### Mechatronics Engineers

Mechatronics engineers integrate electronic devices with mechanical systems and information technology. They are involved in the evolution of computers, software, electronics, sensors and actuators to improve products, processes and services in such sectors as automotive, aerospace and machine tool industries and the defence sector. Find out more about [Mechatronics Engineering](http://www.mech.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/why-study-mechatronics.html).

### Software Engineers

Software engineers combine their skills in computer science, engineering and maths to design, develop and test software for various functions - from mobile applications to banking, architecture, medicine and telecommunications. Find out more about [Software Engineering](http://www.ece.auckland.ac.nz/en/for/future-undergraduates/fu-study-options/be-hons-software-engineering.html).

If you have a passion for designing solutions to problems and want to use your skills to shape the world we live in now and in the future, then you should consider a career in Engineering.