

Inspiring young females into STEM careers

At CGI we're passionate about inclusion and development. We're also passionate about bringing the next generation of young females into Science, Technology, Engineering and Maths (STEM).

CGI



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We need more women in STEM!

There are, and have been, many successful women in STEM careers, but more work is needed to close the gender gap. We want to make sure you are aware of the multitude of different careers available in STEM and inspire you to enter a STEM career with confidence.

It can be daunting to try to determine what different career options are available to you and what the actual roles involve on a day-to-day basis, or even what subjects can lead to what jobs, so we are here to help.

In this e-booklet, we aim to equip you with information to make informed decisions about the host of exciting career opportunities in STEM, so we can reduce the reasons women choose not to enter STEM careers.

“Our goal at CGI is to build and run brilliant solutions that make a difference to our clients and the world we live in. To achieve this, I believe it is important that CGI reflects society and our clients to ensure we bring diversity of thought and ideas. Our focus on STEM is an important part of this ambition and I am personally committed to continuing to reduce both our gender and ethnicity pay gap, to ensure CGI is a great place for everyone’s technology careers.”



Tara McGeehan

President,
CGI UK and Australia

Science

Science covers a broad spectrum of jobs.

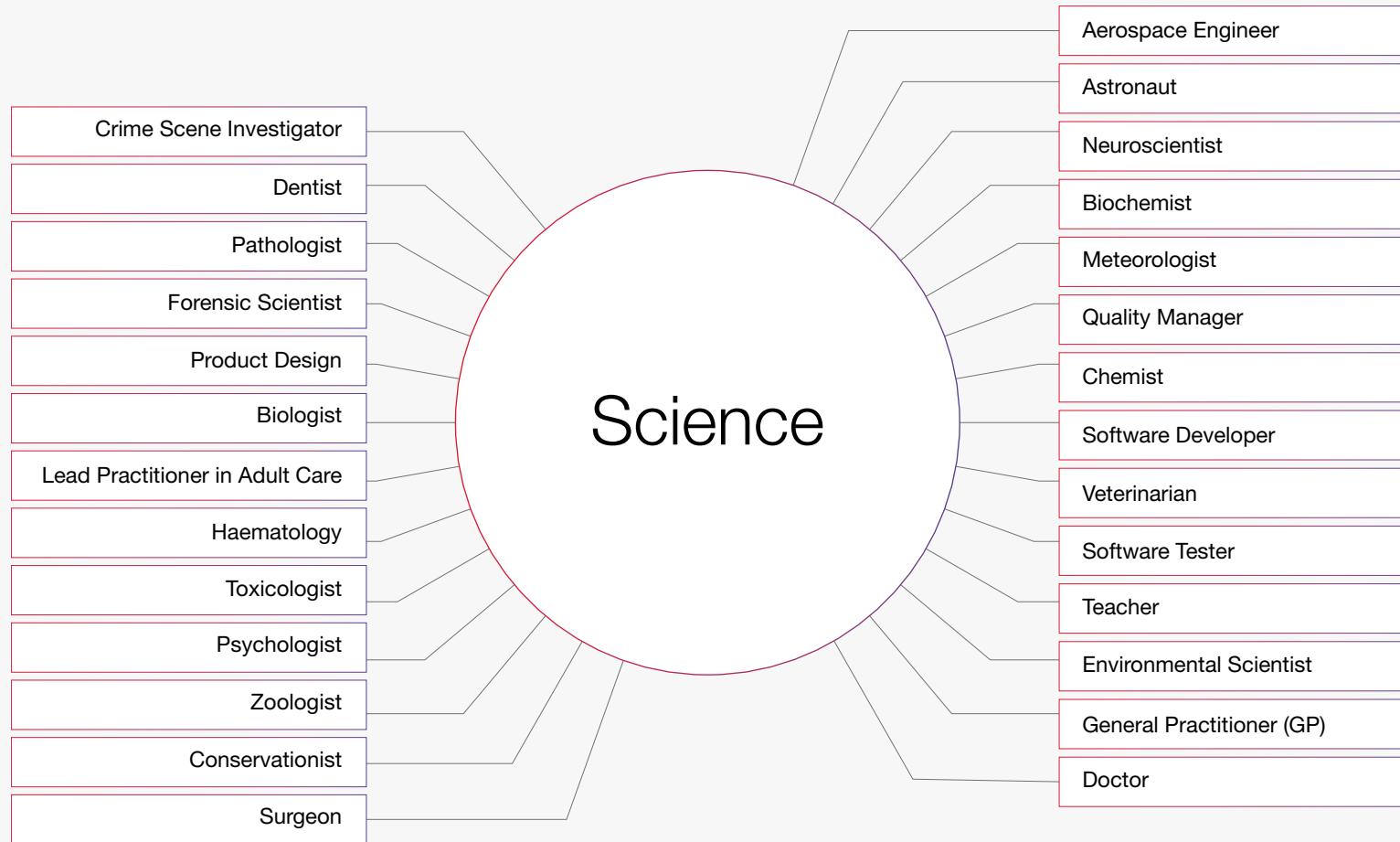
Whether you start your career with a degree in science or just A-levels, there are many exciting jobs on the market for enthusiastic individuals.

Many jobs linked to qualifications in science are not what you would expect.

Watch a day in the life video from a woman in Science



Where qualifications in science may lead you...



Jobs and pay

The average salary for a career in science in the UK is around £38,000, significantly higher than the average UK salary of £27,600.



Highest paying jobs in science

1

Petroleum Engineer

Average salary of £75,000

A Petroleum Engineer determines the most efficient way to drill for and extract oil and natural gas. They oversee drilling operations and resolve any operating problems. They develop new drilling tools and techniques, and find new ways to extract oil and gas from wells.

2

Medical Physicist

Average salary of £46,000

A Medical Physicist is a medical professional who ensures that medical care using radiation is properly performed and contributes to the medical care from the position of a specialist in medical physics.

3

Microbiologist

Average salary of £45,000

Microbiology is the study of organisms (bacterial, viral, fungal and parasitic) that cause infections. As a healthcare scientist working in microbiology, a large part of your work will be the identification and classification of these organisms.

Interesting jobs in science

You don't have to become a scientist if you study a science degree. Science degrees open up lots of other career routes, as many of the skills and knowledge you gain are transferrable. Many science graduates work in business and finance, while others become teachers, technical sales consultants and even science journalists. There is nothing to worry about if you decide a career in science isn't for you.

Pharmacist

Working to legal and ethical guidelines, you'll be responsible for dispensing and distributing medicine, and maintaining and improving people's health. You'll sell over-the-counter medical products and instruct members of the public on the use of medicines and medical appliances.

Perfect for: People who are patient, sensitive and understanding, pay attention to detail and are passionate about customer service and people.

Starting salaries: Between £30,000 and £35,000

What you need to get there: To become a Pharmacist, you need to complete a four-year Master of Pharmacy and one year pre-registration training course in Pharmacy.

To become an Assistant Pharmacist, you can get an apprenticeship, as long as you have GCSEs, but this depends on the apprenticeship provider.

Crime Scene Investigator

You will be responsible for processing and categorising evidence, so it can be used in criminal investigations.

Perfect for: People who have a careful and methodical approach to work, good attention to detail with keen observational skills, strong analytical skills and an inquisitive mind.

Starting salaries: Between £16,000 and £24,000

What you need to get there: You can either do a degree in Forensic Science, a scientific subject or apply directly if you have at least five GCSEs at grades 9 to 4 (A* to C) or equivalent, including English, Maths and a Science subject. Some employers may prefer A-levels or equivalent, including a Science subject like Chemistry or Biology.

Quality Manager

Your aim will be to ensure that the product or service that an organisation provides is fit for its purpose, is consistent and meets both external and internal requirements.

Perfect for: Those with good communication and interpersonal skills, analytical, problem-solving ability and planning skills.

Starting salaries: Between £23,000 and £28,000

What you need to get there: A career as a Quality Manager is open to all graduates; a degree in a relevant area such as Business Management) is particularly useful. You can also do an apprenticeship where four or five GCSEs at grades 9 to 4 (A* to C) and A-levels or equivalent, are required for a higher level or degree apprenticeship.

More interesting jobs in science

Dentist

Dentists diagnose and treat dental issues and help patients develop better oral hygiene regimens. They clean teeth, correct bite issues, perform surgeries and extractions, as well as other duties to ensure that the teeth and mouth are healthy.

Perfect for: Those who like helping others, have a steady hand, patient, with good communication skills and can work in a team (dentists are often assisted by dental nurses).

Starting salaries: Around £30,000

What you need to get there: You'll need to complete a five-year degree in Dentistry, approved by the General Dental Council, followed by one to two years of postgraduate Dental Training. You could alternatively become a Dental Nurse via an apprenticeship if you have four or five GCSEs at grades 9 to 4 (A* to C), or equivalent.

Aerospace Engineer

This job involves developing aircraft equipment. Working both individually and as a team, you will use and interpret engineering data and documents (such as engineering drawings, reports and computer-generated models) to design, develop, analyse, test and modify designs and solutions to satisfy customer requirements.

Perfect for: People who are analytical and thorough, have an eye for detail and have some design skills. You will also need to have good communication skills and be able to use a computer proficiently.

Starting salaries: Around £30,000

What you need to get there: To apply for this via the apprenticeship route, you need five GCSEs including in Maths, English and double Science, and A-levels in STEM subjects such as Maths, Physics, Information and Communications Technology (ICT), Computing and Electronics. To apply as a graduate, you can do a foundation degree, higher national diploma or degree in Aerospace Engineering, Avionics, or a related subject.

Lead Practitioner in Adult Care

You will guide and inspire your team to make positive differences to an adult's life if they have physical, practical, social, emotional, psychological or intellectual challenges. You'll develop specialist skills and knowledge in your area of responsibility, allowing you to lead others in your area

Perfect for: People who are caring, compassionate and committed to helping others with excellent communication skills and are able to apply knowledge to real life situations.

Starting salaries: Around £30,000

What you need to get there: You can apply for this via an apprenticeship if you have A-levels (or equivalent qualifications) or relevant experience in the industry. You can also progress to this position from an entry-level job after school with four or five GCSEs at grades 9 to 4 (A* to C).

Inspirational women in science



Nina Tandon

Born: 1980
Job: Biomedical Engineer

Nina Tandon is a biomedical engineer who is changing the world of cell science. She is the founder and CEO of EpiBone, a company that grows bones for skeletal reconstruction. It allows practitioners to repair bone defects in people by using the patient's stem cells to grow new healthy bones in a lab environment. They can be made to exact measurements to reflect the patient's body. It also means that the patient's immune system will naturally accept the new bone, rather than fighting against it. Tandon has also been involved with constructing beating hearts using the same method. She has won many accolades, including becoming a TED fellow and being named as a 2015 Global Thinker by Foreign Policy magazine.



Helen Sharman

Born: 1963
Job: Astronaut and Chemist

Helen Sharman is a chemist who became the first British astronaut in May 1991 at the age of 27. She launched on a Soyuz spacecraft and spend eight days orbiting the earth, mainly living and working on the Mir Space Station as part of Project Juno. In space, Helen's tasks included medical, agricultural and chemical experiments, materials' testing, Earth observation work and operating an amateur radio link with British school students. She also took seeds from space that she brought back to Earth for British school students to use as part of a UK-wide experiment to investigate the effects of space travel on the seeds as compared with a control sample.



Dame Jane Morris Goodall

Born: 1934
Job: Primatologist and Conservationist

Dr. Goodall was fascinated by chimpanzees and at the age of 21, she went in search of them to bring more understanding to the world about our closest relatives. In 1960, Dr. Goodall discovered that chimpanzees make and use tools and this is still considered to be one of the greatest achievements of the twentieth-century scholarship. Through nearly 60 years of ground-breaking work, she has not only shown us the urgent need to protect chimpanzees from extinction, she has also redefined species conservation to include the needs of local people and the environment. Today, she travels the world, speaking about the threats facing chimpanzees and environmental crises, urging each of us to act on behalf of all living things and the planet we share.

Technology

The technology sector is ever expanding and developing. It's a perfect avenue for those looking for challenges in their work.

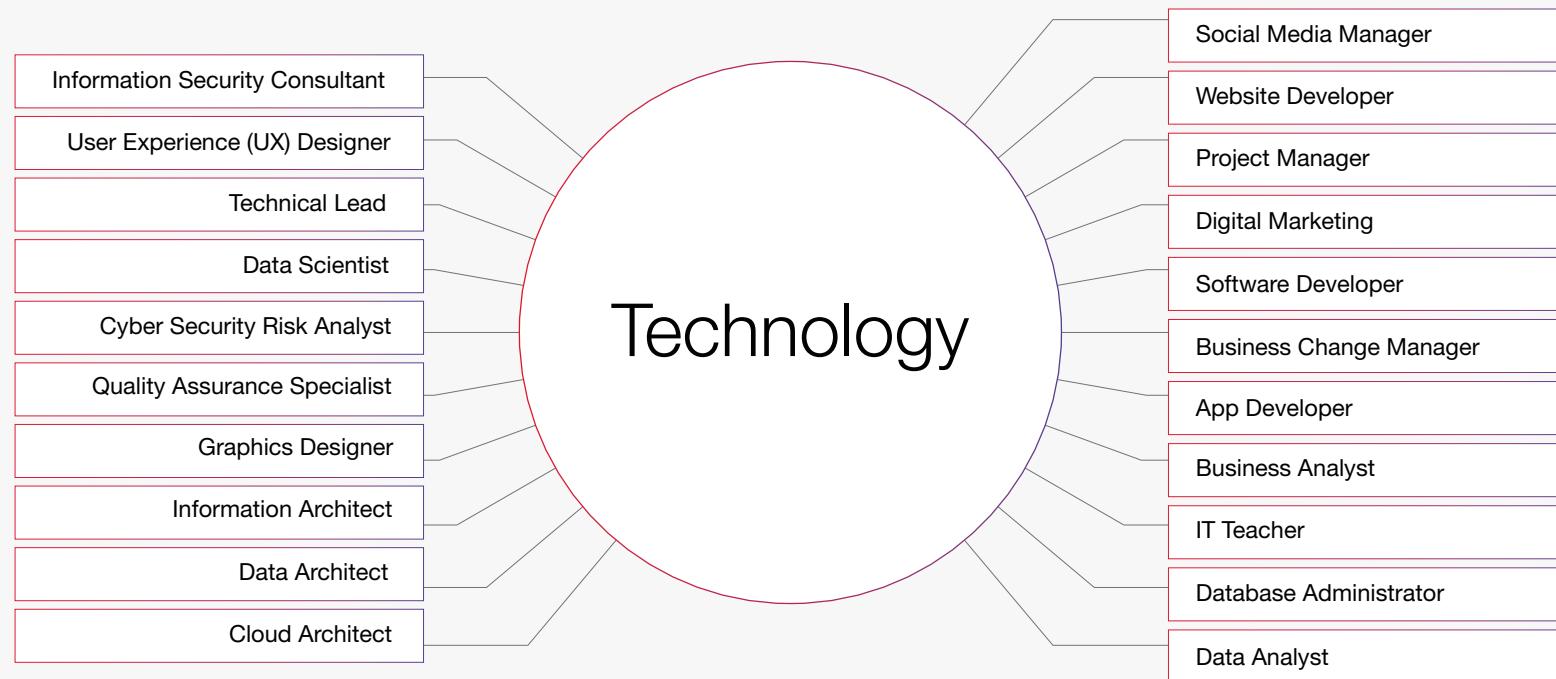
It is an exciting field of work and offers a vast variety of job opportunities.

We live in a world where the advancements of technology touch every area of our lives, therefore we need more women to enter the field!

Watch a day in the life video from a woman in Technology

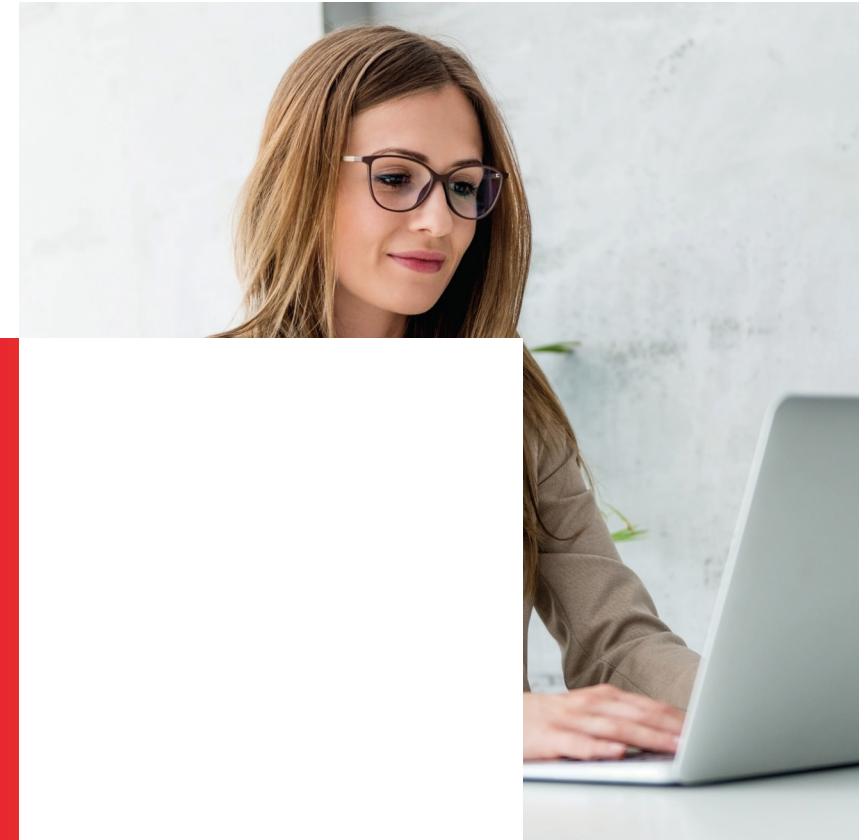


Where qualifications in technology may lead you...



Jobs and pay

Did you know that in 2019, the average UK salary in technology was £74,000?



Highest paying jobs in technology

1

Chief Architect

Average salary of £82,000

A Chief Architect's main role is to look closely at how IT functions can be centralised so that departments across the company can work together seamlessly.

2

Security Architect

Average salary of £80,000

A Security Architect is responsible for maintaining the security of a company's computer system. They must be able to think as a hacker would, as they need to anticipate all of the moves and tactics that hackers will use to try to gain unauthorized access to the computer system.

3

Data Architect

Average salary of £78,000

A Data Architect is responsible for designing, creating and managing an organisation's data architecture (this is a set of standards that govern and define the type of data collected and how it is stored and integrated within an organisation). They define how the data will be stored, used and managed by different IT systems, as well as applications using or processing that data in some way.

Interesting jobs in technology

Some higher paying IT jobs require that candidates have a bachelor's degree, ideally in a related subject. However, some employers care more about the quality of your work than they do about your formal education. They evaluate candidates based on their portfolio and experience. There are also many opportunities to complete a degree apprenticeship which combines real-world experience and studying part-time at a university.

IT Sales Consultant

You'll usually work with commercial clients, finding the right technological products to suit their business needs. This involves demonstrating features of a particular product, writing proposals for clients and advising on training.

Perfect for: Those who enjoy talking to people, have an eye for detail and are able to understand the needs of others. Time management, resilience and dedication are also essential skills to have for this job.

Starting salaries: Between £20,000 and £30,000

What you need to get there: This area of work is open to all graduates, but a degree in a related IT or business subject may be useful. You may also be able to complete an apprenticeship in this role after school or college; an employer may favour those with subjects that have high technical content or a business management component, and having a retail background can also be useful.

Network Architect

A Network Architect is responsible for the design, installation, maintenance and support of communication networks within an organisation or between organisations. They understand network configuration, cloud, network administration and monitoring tools, and need to be able to give technical advice and guidance.

Perfect for: People who are good at problem solving with a critical and analytical mind. It is also good for people who can demonstrate good time management skills, and enjoy working both in a team and independently.

Starting salaries: Around £28,000

What you need to get there: Most employers will require a degree in Computer Science, IT or similar subject. You can also become a Network Architect with an apprenticeship if you have three A-levels or equivalent.

Project Manager

Within the IT industry, Project Managers oversee the development and installation of computer systems for their clients. They are responsible for ensuring the project is completed on time, within a set budget and to a high standard. This role involves planning the project, coordinating the project team, and engaging with senior managers and clients.

Perfect for: An organised person who can work under pressure, lead people and is able to multitask. Project managers need to have good communication and budgeting skills too.

Starting salaries: Around £30,000

What you need to get there: Most Project Manager roles will require you to have a degree in IT and/or a business-related subject. However, you could also get into this job with a higher or degree-level apprenticeship. You may be able to start as an Assistant Project Manager without these qualifications if you have some experience working in IT.

More interesting jobs in technology

Software Engineer

In this role, you will design, build and test high-quality software solutions (i.e., software that is used to solve a client problem). A Software Engineer also writes code to ensure software is working efficiently. When required, Software Engineers make recommendations for future developments to the software.

Perfect for: People with an analytical mind who can translate user requirements into a working piece of software. It also is good for people who like working with others and have good communication skills. Writing skills are important for this role.

Starting salaries: Around £30,000

What you need to get there: Most employers will require someone to have a degree in Computer Science, Information Systems or related degree, as having technical ability is desirable. You could also become a Software Engineer by completing a degree apprenticeship, which usually requires you to have three A-levels or equivalent qualification.

Business Analyst

A Business Analyst identifies future needs of organisations and users, then creates solutions to help meet those needs – usually in relation to information and software systems (e.g., operating systems such as Windows or Android, or programming languages). The role also involves communicating between a client's departments and acting as a 'translator' to communicate how IT can support their needs.

Perfect for: People who enjoy working with other people, use their initiative and are able to adapt to change. You'll need an analytical brain, good communication and customer service skills.

Starting salaries: Around £30,000

What you need to get there: A degree in Business, Computer Science or similar, or you could start by completing a Level 4 or degree apprenticeship after completing A-Levels (or equivalent).

Penetration Tester

Also known as 'ethical hackers', this job involves performing authorised tests on computer systems to expose weaknesses in their security that could be exploited by criminals. Working with clients, you may also provide advice on how to minimise risks.

Perfect for: People who can actively learn from real-world experiences, have good writing skills to generate reports from testing, pay keen attention to detail and have good planning skills.

Starting salaries: Around £30,000

What you need to get there: You usually need a relevant degree and good knowledge of computer operating systems and information security. Many people gain industry experience in another related job before becoming a Penetration Tester, but some organisations offer graduate Penetration Tester roles. It is also possible to obtain a degree apprenticeship in cybersecurity, combining work with part-time study at a university instead.

Inspirational women in technology



Hedy Lammar

Born: 1914
Job: Actress and Inventor

Hedy Lammar is best known for her acting, but a little known fact is that she actually co-invented the technology used now in Wi-Fi, Bluetooth and GPS.

She helped develop a more secure method of communication for troops from the front line in World War II by manipulating radio frequencies at irregular intervals to create an unbreakable code that the enemy could not intercept. Decades later, the invention called Spread-Spectrum or Frequency Hopping technology was found to have many applications, including military and in the digital boom of more recent times.

She is mainly remembered as being a great beauty and silver screen star but she in fact was an incredible inventor and scientist.



Gwynne Stowell

Born: 1963
Job: COO of SpaceX

Gwynne has always been interested in all things mechanical, and she studied Mechanical Engineering and Applied Mathematics. From there, she went on to work at The Aerospace Corporation, and conducted work on military space research and design projects.

In 2002, Gwynne was approached by Elon Musk to run his SpaceX company in the hopes that her hands-on knowledge would make her an effective CEO.

Gwynne accepted and is now widely reported to be not only one of the most influential women in the tech industry, but also one of the most powerful women of our times.



Tabitha Goldstaub

Born: 1987
Job: Co-Founder of CognitionX

Tabitha is a prolific and highly public figure in the world of artificial intelligence (AI) and women's representation in STEM, co-founding four companies, and winning a number of awards for her work and influence in the industry. In 2017, she was named Head of the UK Government's AI Council and 'AI Business Champion' in 2018.

Tabitha's primary work is with CognitionX, which offers businesses the chance to learn and use AI. She is also instrumental in The Future Girl Corp, which offers a series of free monthly events promoting women's entrepreneurship, and Project Placed, which looks to enhance experiential learning by pairing students with businesses during their university degrees.

Engineering

Engineering degrees and jobs are perfect for anyone who loves to build and create.

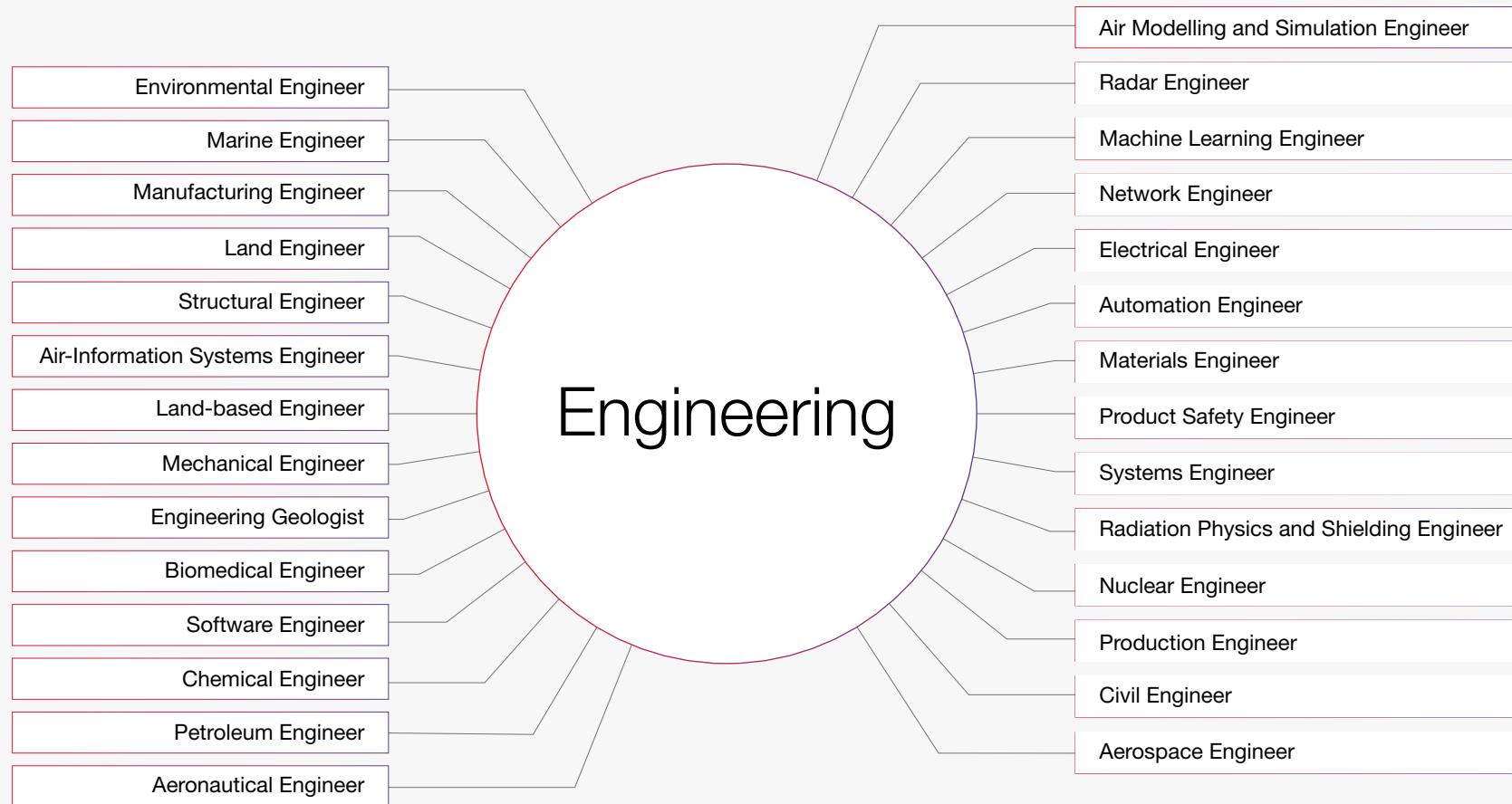
Hosting a wide range of fields, engineering explores everything from artificially-designed materials to planes, bridges, buildings and satellites.

This versatile field will teach you to apply science and maths skills to everyday problems, helping you find solutions for anything and everything.

Watch a day in the life video from a woman in Engineering



Where qualifications in engineering may lead you...



Jobs and pay

Working in engineering in the UK typically pays around £59,900 per year but salaries range from around £19,000 to £127,000.



Highest paying engineering industries

1

Energy and Nuclear

Average salary of £59,000

Over half of the UK's electricity in 2019 was powered by renewable and nuclear generators, and the government plans to generate one-third of the UK's electricity from offshore wind alone by 2030. Now is an excellent time to contribute to the transformation of the UK's power supply.

2

Oil and Gas

Average salary of £57,000

Despite uncertainty in the oil and gas market, new wells continue to be approved and the average salary of oil and gas engineers has improved from £53,000 in 2018. The industry is also known to be generous in salaries for new hires, with junior engineers and graduates earning £36,000 on average.

3

Chemicals and Medical

Average salary of £56,000

One of the most in demand jobs in the UK, and constantly requiring more people to invest in advances in Nanotechnology and Bioengineering.

Interesting jobs in engineering

While studying for an engineering degree is a great way to become an engineer, you neither need the degree to work as one nor need to go into an engineering career after the degree. Many companies offer apprenticeships or jobs as Junior Engineers to students without degrees. Some will even offer to fund a degree midway through your employment. Equally, engineering graduates have several transferrable skills, allowing them to work as analysts, consultants, academics and more.

Aerospace Engineer

You'll research, design, develop, maintain and test aircraft, missiles, satellites, space vehicles and weapons systems.

Perfect for: People with creativity, innovation, problem solving ability and a passion for all things flying.

Starting salaries: Around £30,000

What you need to get there: A degree in Aeronautical or Aerospace Engineering is preferred, but you can also use a degree in other Engineering disciplines, Maths, or Space-related courses.

Biomedical Engineer

You'll be designing, testing and implementing new medical procedures (such as computer-aided surgery) and modifying products.

Perfect for: People who enjoy bringing their designs to life and have an interest in the medical industry.

Starting salaries: Around £30,000

What you need to get there: A degree in Biomedical or Mechanical Engineering, and you'll also need a National Health Service (NHS) Scientist Training Programme after your degree to work for the NHS.

Chemical Engineer

You'll be involved in the design and development of a huge range of materials, changing the chemical, biochemical and physical state of a substance to turn it into something else.

Perfect for: People with good communication skills who enjoy coordinating teams and exploring potential health, safety and cost issues.

Starting salaries: Around £28,000

What you need to get there: You'll likely need a degree in Chemical Engineering, Chemistry, Biochemistry, or Process Engineering.

More interesting jobs in engineering

Electrical Engineer

You'll be required to identify what the customer requirements are (for electrical products or systems) and turn these into a design to develop and install for them.

Perfect for: People who have good oral and written communication skills, flexibility to deal with changing circumstances and technologies, and strong planning and organisational skills.

Starting salaries: Around £24,000

What you need to get there: You will need an apprenticeship, foundation degree or undergraduate degree in Aeronautical, Software, Mechanical or Electromechanical Engineering. These usually require you to have three A-levels or equivalent qualifications.

Machine Learning Engineer

You will create programmes or algorithms that enable machines to act without further instruction and be able to learn automatically from experience (e.g., self-driving car).

Perfect for: People with a passion for programming and have creativity, good written and verbal communication skills (to help explain complex processes).

Starting salaries: Around £35,000

What you need to get there: A master's degree in Computer Science, Electrical Engineering or Mathematics.

Nuclear Engineer

You'll be designing new systems, improving efficiency, stability or sustainability for nuclear power stations or buildings, and safely decommissioning them.

Perfect for: People who want to work in a constantly evolving field, contributing to the world's energy supply in a potentially high security environment.

Starting salaries: A technician or apprentice can earn between £15,000 and £20,000, whereas graduates can earn between £20,000 and £28,000.

What you need to get there: A degree in Engineering or related subject (such as physics). You can also do an apprenticeship where you need three A-Levels, including Maths and a Science subject, or equivalent qualifications.

Inspirational women in engineering



Ann Makosinski

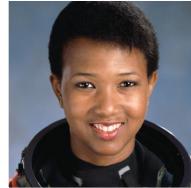
Born: 1997
Job: Inventor

Ann Makosinski is a highly praised student-inventor interested in alternative energy, harvesting techniques and their applications in improving the lives of people all over the world.

She is best known for her invention, the Hollow Flashlight (torch), a torch that runs only off the heat of the human hand.

Ann has won numerous awards for her contributions, including \$5,000 to support her education when she presented her invention, the 'eDrink mug', to Jimmy Fallon on the Tonight Show in the USA.

Currently, Ann is working on her first book.



Mae Jemison

Born: 1956
Job: Engineer, Physician and former NASA Astronaut

Mae developed a keen passion for Science and entered University at only sixteen, having excelled at school.

In 1987, her application to become an Astronaut was accepted by NASA, and by 1992, she was not only the first African-American woman to go to space, but a mission specialist aboard STS-47, Space Shuttle Endeavour. Mae was a co-investigator of bone cell research experiments and also conducted experiments on weightlessness and motion sickness on herself and the crew. In 1993, she resigned from NASA and founded a company researching technology in daily life, and now works on projects to advance technology in developing countries.



Amelia Earhart

Born: 1897
Job: Aviation Pioneer

Amelia went on her first airplane ride in California in 1920, an experience that prompted her to take flying lessons. In 1921, she bought her first plane, a Kinner Airster, and two years later, she earned her pilot's license. In 1928, Amelia set a number of records in her short career.

Her first record came in 1922 when she became the first woman to fly solo above 14,000 feet, and later was the first woman to fly solo across the Atlantic Ocean. As a result, she became somewhat of a celebrity upon her return.

Mathematics

Mathematics degrees are the perfect gateway into a wide range of careers if you don't already know where you want to specialise.

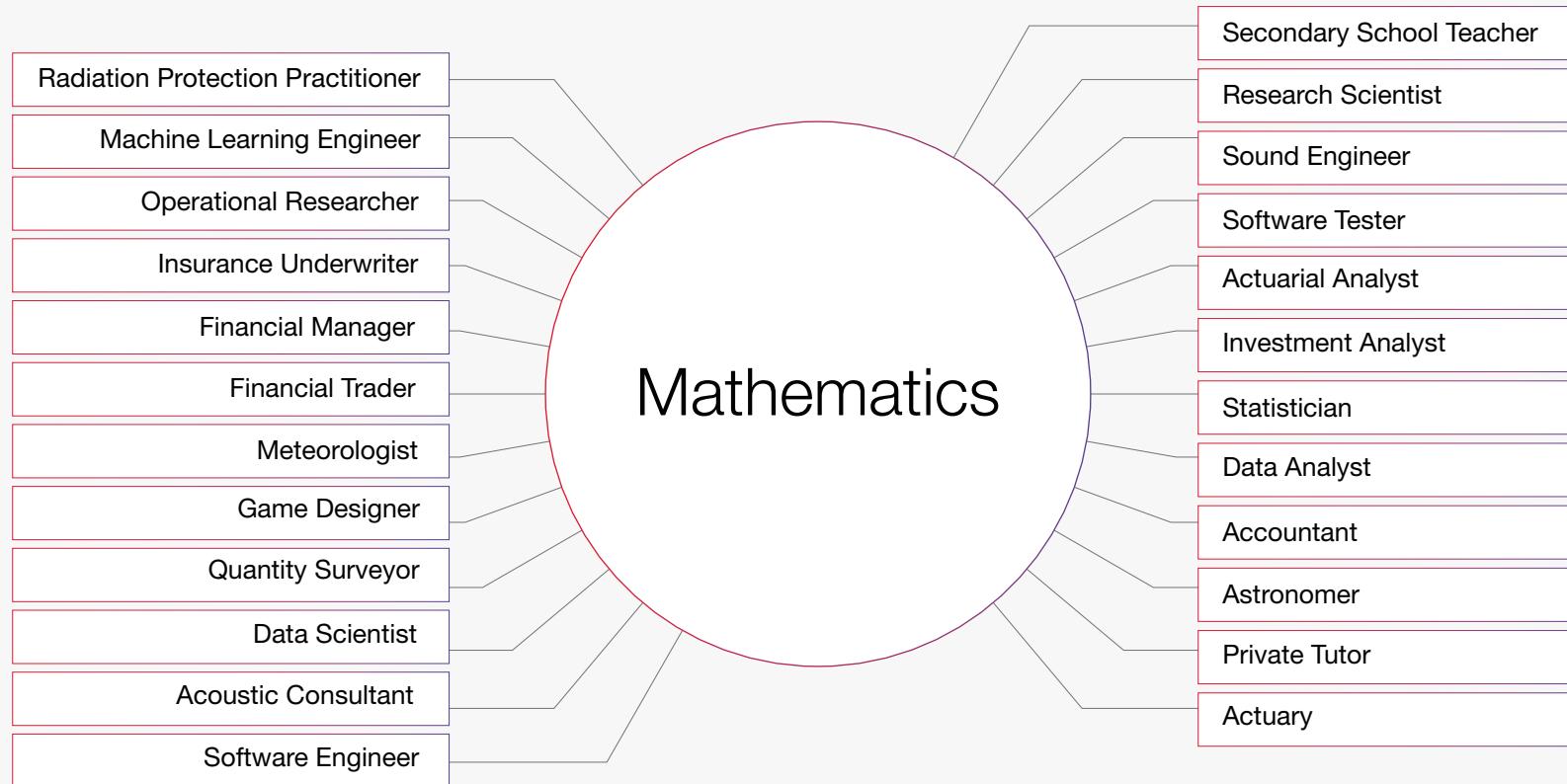
It will teach you the language and skills of technical careers, allowing you to train for most of the careers previously mentioned once you know where you want to work. For example, many engineering and computer science jobs will also accept Mathematicians.



Watch a day in the life video from a woman in Maths

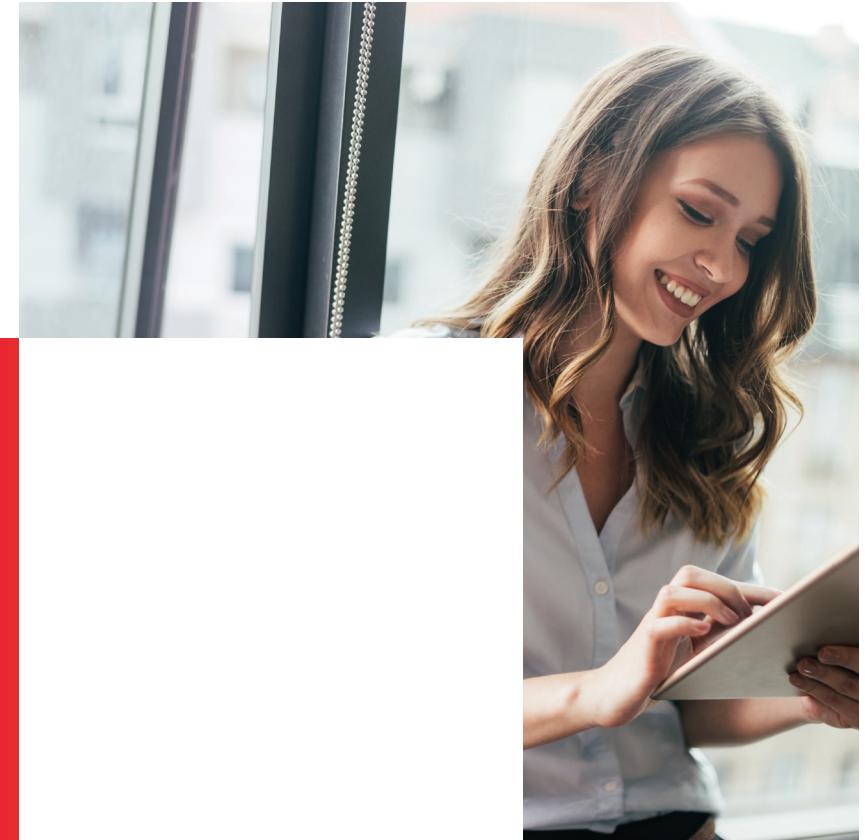


Where qualifications in mathematics may lead you...



Jobs and pay

The average salary for a career in mathematics in the UK is £39,000. There's currently a shortage of maths graduates in the UK, and mathematics degrees can lead to high paying careers in banking or finance for example.



Highest paying jobs in mathematics

1

Computer Research Scientist

Average salary of £57,000

A Computer Research Scientist detects and fixes issues in software systems (e.g., operating systems like Windows or Android) as well as designing tests and experiments to improve the use of the software. They may also create new algorithms and invent new computing tools to aid the way people work with computers.

2

Cryptologist

Average salary of £50,000

Cryptographers secure computer systems and software by creating algorithms and ciphers to protect information and data. They may be required to assess and analyse current systems to identify weaknesses and test new techniques to implement solutions according to the security needs of organisations.

3

Risk Manager

Average salary of £40,000

Risk Managers use statistics to work out the probability of an event and its financial consequences. They use risk management techniques to minimise financial risk for clients. They may be required to analyse data to determine potential risks and communicate these to a client.

Interesting jobs in mathematics

You don't have to become an accountant or a teacher if you study a mathematics degree. A lot of the skills and knowledge you gain having a mathematics degree are transferrable, so this offers up a variety of potential career routes.

Accountant

You'll be required to give advice, check an organisation's financial position and inform clients on financial records using financial reporting, taxation and auditing, etc. There are different types of Accountants, such as Forensic Accountants who detect and prevent fraud, and Corporate Accountants who advise clients on business transactions, maintain records and prepare accounts information.

Perfect for: People with good business sense and numeracy skills, capable of using IT and communicating with clients and other team members.

Starting salaries: Around £30,000

What you need to get there: A degree in Maths or a numerical subject (for example, Accounting) or apprenticeships are also available for students with five GCSE's (4-9 or C-A* grades, Maths 7+ or A-A*).

Meteorologist

This job involves examining the weather and climate. You'll predict the weather and study the causes of particular weather conditions using information obtained from the land, sea and upper atmosphere.

Perfect for: People who like analysing, drawing conclusions, making predictions from data, have a high mathematical and computing ability and a high attention to detail.

Starting salaries: Around £20,000

What you need to get there: A degree in Meteorology or related subject such as Computer Science, Environmental Science, Geography, Physics, etc.

Analyst

Analysts create, interpret, and manipulate large amounts of data to streamline the running of businesses in any field. This means providing information to support or contradict key decisions that are to be made in a business.

Perfect for: Anyone with a keen attention to detail and the concentration to use it on large data sets.

Starting salaries: Around £25,000

What you need to get there: A degree with the ability to demonstrate strong numeracy skills. Apprenticeships are also available for students with five GCSEs (4-9 or C-A* grades, Maths 7+ or A-A*).

More interesting jobs in mathematics

Financial Trader

Financial Traders are responsible for buying and selling shares, bonds and financial assets for investors, from private individuals to banks. You'll make prices and carry out trades in search of the most assets or profits with minimum risk.

Perfect for: People who are resilient, able to quickly research and make decisions on financial data, and execute the decision by talking to clients and other traders.

Starting salaries: Around £30,000

What you need to get there: Entry with a degree in Maths or a numerical subject (for example, accounting) although it may be possible to enter the industry in administrative roles, and eventually move into trader positions.

Actuary

Actuaries evaluate risk and opportunity through applying mathematical, statistical, economic and financial analysis to a wide range of business problems. This involves using past collected data, trends or patterns to form a prediction of the financial impact of future events.

Perfect for: People who think before they spend money and have an analytical mind.

Starting salaries: Around £32,000

What you need to get there: A degree with the ability to demonstrate strong numeracy skills. Apprenticeships are also available for students with five GCSEs (4-9 or C-A* grades, Maths 7+ or A-A*).

Quantity Surveyor

You'll be required to manage costs relating to building and civil engineering projects. You may be required to work on a variety of projects including the building of railways, housing and skyscrapers, among others.

Perfect for: Those with a creative approach to problem solving, able to work well under pressure, have a methodical approach to work and have high communication and teamwork skills.

Starting salaries: Around £18,000

What you need to get there: A degree in Quantity Surveying or Commercial Management accredited by the Royal Institution of Chartered Surveyors (RICS). You can also take a RICS-accredited degree apprenticeship (undergraduate, PGDip or Masters) in Quantity Surveying and Project Management, providing you have three A-levels or equivalent qualifications.

Inspirational women in mathematics



Maryam Mirzakhani

Born: 1997
Job: Mathematician and a Professor of Mathematics at Stanford University

Maryam was one of the first two women to compete in the Iranian National Mathematical Olympiad and won the gold medal. She researched a wide range of fields, from the statistical behaviour of movements in defined groups (e.g. positive integers or irrational numbers), to multidimensional geometry (e.g. how you define a five-dimensional cube).

Her achievements include BSc Sharif University of Technology, PhD at Harvard, Research Fellow Clay Mathematics Institute, Professor at Princeton University and Professor at Stanford University.

She was awarded the Fields Medal in 2014 for “her outstanding contributions to the dynamics and geometry of Riemann surfaces and their moduli spaces”.



Katherine Johnson

Born: 1918
Job: Mathematician

Katherine was an American mathematician whose calculations of orbital mechanics as a NASA employee were critical to the success of the first U.S. crewed space flights. Her calculations were also essential to the beginning of the Space Shuttle program, and she worked on plans for a mission to Mars. She had a varied career path, working as a research mathematician, an Aerospace Technologist calculating the flight path for the first American in space, and trusted by NASA to check the work done by their first computers.

She was awarded the Presidential Medal of Freedom in 2015, the Silver Snoopy Award and Nasa Group Achievement Award in 2016, and the Congressional Gold Medal in 2019.



Anne-Marie Imafidon

Born: 1990
Job: CEO of Stemettes (a social enterprise promoting women in STEM careers)

Anne-Marie was a British computing, mathematics and language child prodigy. She received a scholarship to study Mathematics at John Hopkins University at 13, and at 19 was the youngest ever master’s graduate of Oxford University. She launched and became CEO of Stemettes in 2013, championing the work of women in STEM. Stemettes runs panel sessions and hackathons supporting girls and young women who are considering a STEM career.

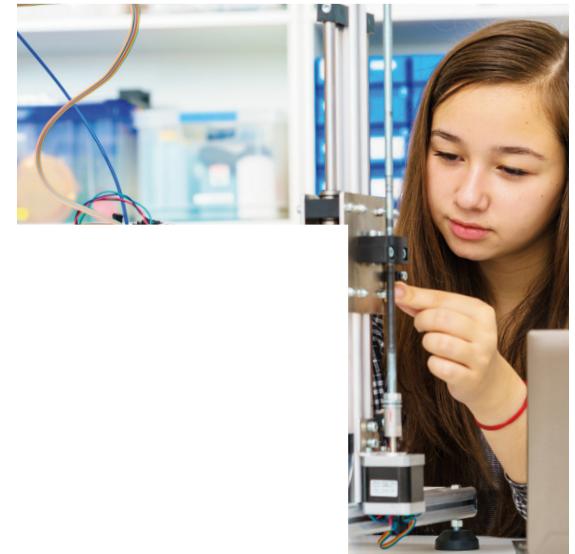
Anne-Marie has been presented with many awards in her lifetime, most notably, she was appointed Member of the Order of the British Empire (MBE) in the 2017 New Year Honours for services to young women within STEM careers.

Fewer women choose to enter the world of STEM for various reasons, such as:

- Gender stereotypes – STEM fields may be viewed as ‘masculine’, however this e-booklet will demonstrate that this is not the case.
- Male-dominated cultures – because fewer women study and work in STEM, it may seem more of a ‘boys club’, but this is not true!
- Fewer role models – many people are not aware of the female role models in STEM, sometimes because examples are limited in the media, but we will talk about some of these women later on.

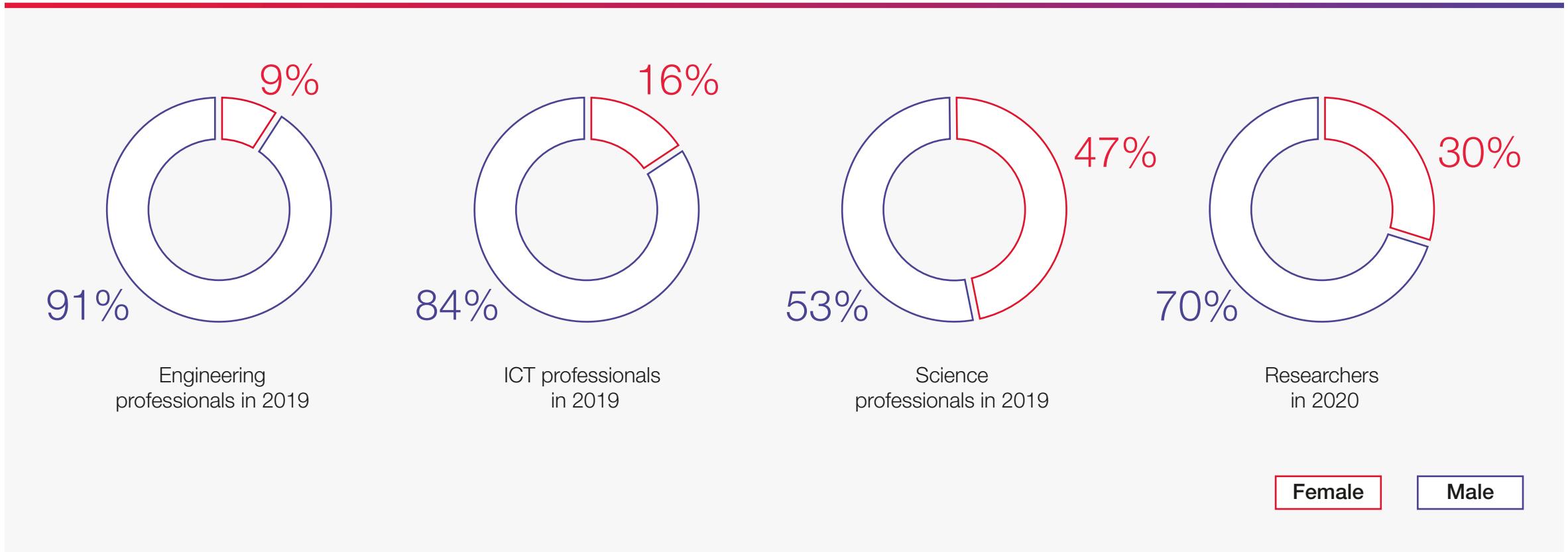
The gender gaps are particularly high in some of the fastest-growing and highest-paid jobs of the future, such as computer science and engineering, however the pay gap has been getting smaller in recent years as more women are taking the opportunity to study and work in STEM roles.

Throughout history, women have played prominent roles in some of the world’s best advances in Science, Technology, Engineering and Maths (STEM).



Industry statistics

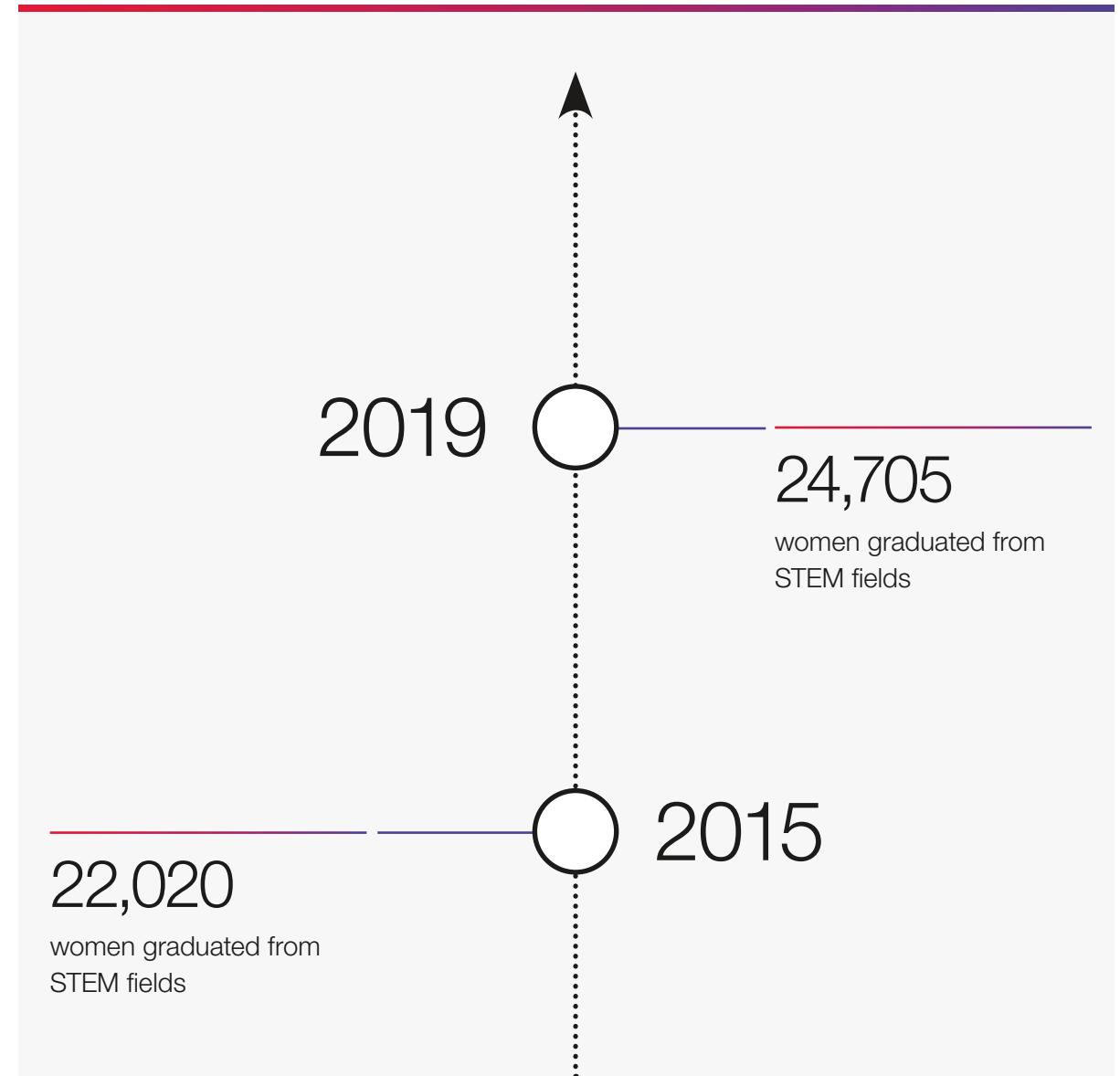
Here is an insight of the male to female ratio within some role sectors.



Source/Information: [2019 Workforce Statistics](#) | [World Economic Forum](#)

On the rise...

The number of women in the UK who are awarded STEM degrees every year has increased, and this is continuing to improve.





About CGI

- 78,000 consultants and professionals
- Around 6,000 experts based across the UK
- 400 locations worldwide with offices in major cities across the UK

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. We are an established and growing company that offers the opportunity to work on some of the most exciting business and technology projects. We're passionate about diversity, inclusion and development, so we're particularly keen to help ambitious and capable women launch fast-moving STEM careers.

An inclusive environment

The culture of ownership and pride is what defines and drives us at CGI. Our collaborative working practices and supportive networks promote diversity and inclusion throughout our business.

We place particular emphasis on gender diversity; **we want to ensure that all women have the opportunity to thrive at CGI.**

We believe that **women are vital to the future of STEM**, and only through harnessing talent across genders, cultures and continents can we create lasting solutions to the technology challenges facing our world today.

38%

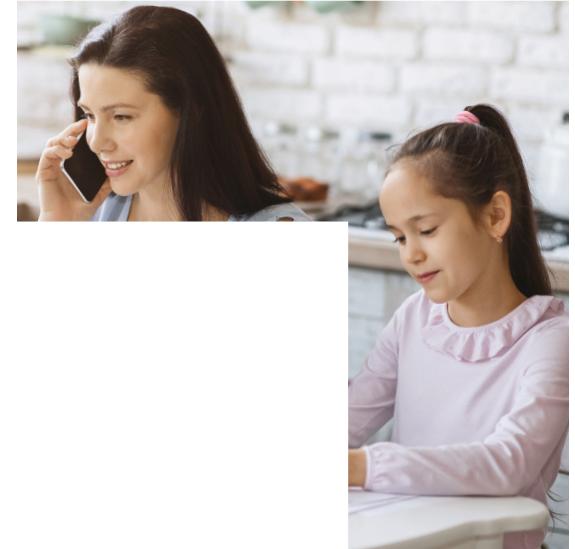
of our senior leadership team in the UK are women

300

girls have attended our 'Bring your daughter to work' days

Over 90%

of our female members put forward for promotion this year were successful



Why working at CGI is different

Our membership culture, where we encourage every team member to become a shareholder, makes us different from other employers. When you have a stake in the business, its growth mirrors yours.

Therefore, we'll help you take your career to the next level by:

- Investing in your training and development
- Helping you gain formal qualifications
- Giving you work you find enjoyable and stimulating
- Supporting you through the good and bad times in your life



What our CGI members say...



Donna,
Senior Vice President

“CGI empowers you as a woman. CGI lets you be yourself. It allows you to bring your whole self to work. We offer flexibility, understanding and it’s a great, fun place to be.”

Source/Information: [Women of CGI](#)



Katie,
Senior Marketing
Consultant

“Flexibility is really important to me and that’s something that CGI offers. I really feel like I’ve got a good work-life balance working here.”



Caroline,
Senior Consultant
CGI UK Women Network

“I’ve been encouraged to empower other people through the work that I do at the Women’s Network but also, I have been given an opportunity to expand myself and grow mentally as a person.”

CGI UK was named as a certified Top Employer in 2020 for the seventh year running by the Top Employers Institute, which recognises our commitment to rewarding and developing talent.

We have also been recognised by the Chartered Institute of Personnel and Development (CIPD), having been awarded Best Health and Wellbeing Initiative for our Oxygen programme and TARGET jobs, **which gave us the Best School Leaver Programme Award and Great Place to Work Award.**



School leavers

You can be part of everything we do, developing the skills and understanding you'll need for a career in IT through training and hands-on experience.



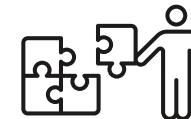
Graduates

You can make an impact on the world as part of a growing company with the scale and strength to give your career the best possible start.



Our dream

To create an environment in which we enjoy working together and, as owners, contribute to building a company we can be proud of.



Our vision

To be a global world class end-to-end IT and business consulting services leader helping our clients succeed.

Shining a spotlight on the women of CGI

We believe we've created a supportive and inclusive culture for women.

Hear first-hand from some of our fantastic female members, talking about their experiences at CGI and sharing all that we're doing to ensure their careers flourish.

See our video on YouTube



Source/Information: [Women of CGI](#)



Where else can you get involved in STEM with us?

STEM Camps and STEM from Home

These are educational and interactive events that teach students about the skills and career opportunities in Science, Technology, Engineering and Maths.



STEM from Home originated in March 2020 and our weekly STEM-based activity packs have engaged parents and children with a range of fun and educational activities to try at home.

EmployABILITY

CGI's EmployABILITY programme helps students that are currently underrepresented in our industry to build the skills needed to pursue a successful career in STEM.



Through this programme, you can gain industry insight, connect with STEM professionals and prepare for the world of work by learning about CVs, interviews, networking and more.

You can find out more information about all of these by clicking on the following links:

[STEM Camps](#) | [STEM from Home](#) | [EmployABILITY](#)

Helpful resources

[Career in STEM](#)

A free video-based career exploration and readiness tool for girls. It has a large online collection of career guidance videos focusing exclusively on diverse and accomplished women — over half of whom are in STEM fields — and is updated weekly.

[National Careers Service](#)

A government website that provides information, advice and guidance to help you make decisions on learning, training and working in England. This includes a service where you can speak to a career advisor (for free) via the phone or webchat.

[The Apprenticeship](#)

A resource that aims to educate young people about their career options and inspire them to seek an apprenticeship when they leave school or college.

[Universities and Colleges Admissions Service](#)

The Universities and Colleges Admissions Service that supports young people making post-16 choices, as well as those applying for undergraduate and postgraduate courses.

[Complete University Guide](#)

Independent UK university rankings, course information and expert advice for students.

[The career guide](#)

Provide students and graduates with guidance on graduate career and postgraduate study recruitment options with unrivalled information, advice, and opportunities.

[Careers with CGI](#)

A CGI resource here you can explore the range of school leaver and graduate opportunities at CGI and apply.

[CGI Women in STEM](#)

A brochure for you to learn more about the CGI mission and be part of our story.

Sources

- [2019 Workforce statistics – One million women in STEM in the UK](#)
- [3 things to know about women in STEM](#)
- [Statistics for percentages of women in STEM](#)
- [The best paying jobs in Science](#)
- [Key information about career as a petroleum engineer](#)
- [Career as a Healthcare Scientist](#)
- [The medical physics education program](#)
- [The career guide](#)
- [Average salary of an engineer in UK](#)
- [About Helen Sharman: The first British astronaut](#)
- [Story of Dr. Jane Goodall: The Chimpanzee expert](#)
- [A read on average UK tech salary's growth](#)
- [Average salary of a Chief Architect](#)
- [National Careers Service](#)
- [About Hedy Lamarr](#)
- [About Hedy Lamarr: co-inventor of 'Secret Communications System'](#)
- [About Gwynne Shotwell: The President and COO of SpaceX](#)
- [Key information about career as a Petroleum Engineer](#)
- [Members of advisory councils of Founders4Schools](#)
- [Roadmap for next 10 years](#)
- [Average salary of an Engineer in UK](#)
- [Survey report on balancing the scales between pay and gender](#)
- [Career advice and opportunities](#)
- [Opportunities for Electrical and Electronic Engineers](#)
- [Ann Makosinski - Student Inventor, Google Science Fair Winner & Forbes 30 Under 30](#)
- [Astronaut Mae C. Jemison, M.D., Mission Specialist.](#)
- [About Amelia Earhart: an American aviation pioneer and author](#)
- [Photo gallery of Amelia Earhart](#)
- [10 degrees that get UK graduates the highest-paid jobs](#)
- [Average salary for Computer Science jobs](#)
- [About Computer and Information Research Scientists](#)
- [The average salary of Computer and Information Research Scientist in UK](#)
- [Career as a Cryptographer](#)
- [Job profile of an Actuary](#)
- [Opportunities for a mathematics degree holder](#)
- [Maryam Mirzakhani - Iranian mathematician and a professor at Stanford University](#)
- [About Maryam Mirzakhani: A mathematician and professor at Stanford University](#)
- [Langley Research Center](#)
- [Katherine Johnson biography](#)
- ["Opportunities and Challenges: Navigating the new world of data" panel at Allen & Ovary in London.](#)
- [About Anne-Marie Imafidon](#)
- [Company overview: CGI,UK](#)
- [Opportunities for Women of CGI](#)
- [EmployABILITY Programme: A CSR initiative by CGI](#)
- [CGI STEM Camps](#)
- [STEM from Home by CGI](#)

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

cgi.com/uk

Be part
of our story.

#ExperienceCGI



The CGI logo, consisting of the letters 'CGI' in a bold, red, sans-serif font.