Week 1

Careers of the Month December: Careers in Engineering

Engineering is about solving problems, improving how things work and helping to create the world around us. Engineers design buildings, invent new technologies, fix machines and keep important systems running safely. There are many different types of engineering, some practical and hands-on and others more focused on design or problem solving. If you enjoy maths, science or figuring out how things work, engineering could be a great path for you.

- **Mechanical Engineer**

Mechanical engineers design, build and test machines and tools, anything from car engines and robots to heating systems or medical devices. They use maths, physics and problem-solving to make sure everything works safely and efficiently. Mechanical engineers work in industries like transport, manufacturing, energy and aerospace. It's a varied and practical job for someone who loves understanding how things move and operate.

- **Automotive Technician**

Automotive technicians repair and maintain cars and other vehicles. They diagnose faults, fix engines, change parts and make sure vehicles are safe to drive. This job suits people who enjoy hands-on work, problem solving and understanding how engines and electrical systems function.

How to Get Into the Job

A-levels in Maths, Physics or Engineering are helpful for becoming a mechanical engineer. Most people then complete an engineering degree or a degree apprenticeship. Automotive technicians often start with a college course in vehicle maintenance or a motor vehicle apprenticeship, which combines learning with real workshop experience.

Week 2

Careers of the Month December: Careers in Engineering

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• Civil Engineer

Civil engineers help design and construct the buildings and structures we use every day — such as roads, bridges, tunnels, schools and flood defences. They work both in offices and out on construction sites, making sure projects are safe, sustainable and built to last. Civil engineering is a great choice if you enjoy large-scale projects and want to help shape communities and the environment.

• Construction Technician

Construction technicians support engineers and project managers on building sites. They help with planning, measurements, safety checks and quality control. They often use technical drawings and equipment to help bring building designs to life.

How to Get Into the Job

A-levels in subjects like Maths, Physics or Geography can be useful for civil engineering. Many people study civil engineering at university or apply for a degree apprenticeship with a construction or engineering company. For construction technicians, college courses in construction or an apprenticeship in construction and the built environment are common starting routes.

Week 3

Careers of the Month December: Careers in Engineering

Engineering is about solving problems, improving how things work and helping to create the world around us. Engineers design buildings, invent new technologies, fix machines and keep important systems running safely. There are many different types of engineering, some practical and hands-on and others more focused on design or problem solving. If you enjoy maths, science or figuring out how things work, engineering could be a great path for you.

• Electrical Engineer

Electrical engineers work with electrical systems in homes, factories, transport and technology. They help design and improve things like power networks, control systems, renewable energy equipment and electronic devices. This job suits someone who enjoys problem solving and understands how circuits and electricity work.

• Electrician

Electricians install, maintain and repair electrical systems in buildings. They fix wiring, fit lights and sockets and make sure electrical equipment is safe to use. Electricians often visit different places each day and work with tools and electrical testing equipment.

How to Get Into the Job

To become an electrical engineer, A-levels in Maths, Physics or Electronics are helpful, followed by a degree or degree apprenticeship in electrical engineering. Electricians usually start through an apprenticeship or a college course in electrical installation, which includes hands-on training.

Week 4

Careers of the Month December: Careers in Engineering

Engineering is about solving problems, improving how things work and helping to create the world around us. Engineers design buildings, invent new technologies, fix machines and keep important systems running safely. There are many different types of engineering, some practical and hands-on and others more focused on design or problem solving. If you enjoy maths, science or figuring out how things work, engineering could be a great path for you.

• Software Engineer

Software engineers create computer programs and apps that people use every day. They write code, test software and help design systems for phones, games, websites and businesses. This job suits someone who enjoys logical thinking and creative problem solving.

• Cyber Security Technician

Cyber security technicians help protect computers and networks from hacking and online threats. They monitor systems, fix security problems and help keep data safe. This career is ideal for someone who likes technology and thinking ahead to spot risks.

How to Get Into the Job

To become a software engineer, useful A-level subjects include Computer Science, Maths or ICT. Many people study software engineering or computer science at university, or take a degree apprenticeship in digital or software development. Cyber security technicians often start with college courses in IT or cyber security, or through cyber security apprenticeships that provide practical experience.