**Department Of Engineering**



Definition

* Engineering is a discipline dedicated to problem solving. Our built environment and infrastructure, the devices we use to communicate, the processes that manufacture our medicines, have all been designed, assembled or managed by an engineer.

You will find engineers working on advanced prosthetics, creating new materials, investigating engine efficiency and alternative fuels, constructing bridges or developing clean water systems. From satellites to cell membranes engineers use maths and science to achieve extraordinary things and find solutions to some of the world's most complex challenges.

**Types of Engineering**

* **Civil Engineering**
* **Mechanical Engineering**
* **Electrical Engineering**
* **Marine Engineering**
* **Network Engineering**

**Civil Engineering**

* **Civil engineering**, the profession of designing and executing structural works that serve the general public, such as [dams](https://www.britannica.com/technology/dam-engineering), [bridges](https://www.britannica.com/technology/bridge-engineering), [aqueducts](https://www.britannica.com/technology/aqueduct-engineering), [canals](https://www.britannica.com/technology/canal-waterway), [highways](https://www.britannica.com/technology/highway), power plants, [sewerage systems](https://www.britannica.com/technology/sewerage-system), and other [infrastructure](https://www.merriam-webster.com/dictionary/infrastructure). The term was first used in the 18th century to distinguish the newly recognized profession from [military engineering](https://www.britannica.com/technology/military-engineering), until then preeminent. From earliest times, however, engineers have engaged in peaceful activities, and many of the civil [engineering](https://www.britannica.com/technology/engineering) works of ancient and [medieval](https://www.merriam-webster.com/dictionary/medieval) times—such as the Roman public baths, roads, bridges, and aqueducts; the Flemish canals; the Dutch sea defenses; the French Gothic cathedrals; and many other monuments—reveal a history of inventive genius and persistent experimentation.

**Mechanical Engineering**

* Technically, mechanical engineering is the application of the principles and problem-solving techniques of engineering from design tomanufacturing to the marketplace for any object. Mechanical engineers analyze their work using the principles of motion, energy, and force—ensuring that designs function safely, efficiently, and reliably, all at a competitive cost.

Mechanical engineers make a difference. That's because mechanical engineering careers center on creating technologies to meet human needs. Virtually every product or service in modern life has probably been touched in some way by a mechanical engineer to help humankind.

Being ingrained in many challenges and innovations across many fields means a mechanical engineering education is versatile. To meet this broad demand, mechanical engineers may design a component, a machine, a system, or a process. This ranges from the macro to the micro, from the largest systems like cars and satellites to the smallest components like sensors and switches. Anything that needs to be manufactured—indeed, anything with moving parts—needs the expertise of a mechanical engineer.

**Electrical Engineering**



* Electrical engineering is the field of engineering, concerned with the study, designing, and use of appliances and equipment which use any form of electricity. Therefore, it also includes electromagnetism. Electrical engineering was first acknowledged as a profession when commercialization started to gain ground in the 19th century when electricity became widely generated and distributed. However, this branch of engineering spreads over a wide range of subtypes that include telecommunication, computer engineering, electronics, photonics, etc. Although, instrumentation and signal processing, all are considered part of electrical engineering.

Previously, electrical engineering was limited to industrial use only. However, after the invention of the transistor, the manufacturing cost led the electrical revolution to become part of electric home appliances. Therefore, minimizing the cost of electrical appliances. Even so, they could easily become part of almost every household.

**Marine Engineering**



* Marine engineering is the operation, maintenance and monitoring of mechanical systems aboard marine vessels, including boats, ships and submarines. This profession involves the application of different engineering fields, including computer science, electrical engineering, electronic engineering, and [mechanical engineering](https://www.twi-global.com/technical-knowledge/faqs/what-is-a-mechanical-engineer).

Marine engineers will typically have studied marine engineering and are responsible for some or all major mechanical and engineered systems aboard a vessel. These could include systems related to electricity generation, propulsion, fuel, air conditioning, lighting, water distillation, lubrication, electrical and electronic components, and more.

With working locations including aboard ship, engineers in this profession will typically need to be able to work at sea, including for long durations according to the requirements of their role or employer.

**Network Engineering**



* A network engineer is a technology professional who has the necessary skills to plan, implement and oversee the computer networks that support in-house voice, video and wireless network services.

Although the job titles [network engineer and network administrator](https://www.techtarget.com/searchnetworking/answer/Network-engineer-vs-network-administrator-Whats-the-difference) are sometimes used as synonyms, a network engineer usually has more executive responsibilities than a network administrator. The engineering side deals more with planning, design and technical specifications. The administration side deals mostly with day-to-day maintenance, management and troubleshooting efforts.

The job titles might also differ by education or earnings. Typically, a network engineer has more education and earns more than a network administrator. Employment projections show that network engineers are in demand, and projections indicate the profession -- and other closely related professions -- will grow by about 5% in the next decade.