**WHAT IS ENGINEER?**

“Engineering” is such a broad term that it’s almost meaningless in today’s high-tech, highly specialized world without additional specification. For instance, the roles and duties of a structural engineer are completely different from those of a pharmaceutical engineer — both of which are completely different from environmental engineering, to provide just a few examples.

DIFFERENT TYPES OF ENGINEER

**THERE ARE 20+ TYPES OF ENGINEER**

* **Civil engineer**

Civil engineers work on infrastructure projects, such as the design and construction of airports, bridges, water, and sewage treatment plants, roads and streets, tunnels, and other critical systems that our society needs to operate. Most civil engineering jobs require, at minimum, a bachelor’s degree.

* **STRUCTURAL ENGINEERING**

**Structural engineers are responsible for analyzing and designing construction plans, evaluating and reviewing other engineers’ calculations, and overseeing progress at construction sites**

* **TRANSPORTATION ENGINEERING**

As a transportation engineer, you’ll plan and design the construction of roads, subway systems, airports, and other transportation systems. Your roles might include calculating land needs, estimating costs, and ensuring these systems are adequately maintained

* **ENVIRONMENTAL ENGINEERING**

**The role of environmental engineers is to find solutions and increase efficiency around local, state, and even global environmental issues, including but not limited to air pollution, water pollution, recycling, sustainability, and climate change**

* **MECHANICAL ENGINEERING**

**Mechanical engineering is a subfield of engineering that deals with machinery, equipment, and mechanical sensors, such as combustion engines or steam turbines. As a mechanical engineer, you might be designing new mechanical prototypes, testing and redesigning heating systems, or investigating the causes of equipment failures and breakdowns during the course of your workday. It depends on what type of mechanical engineering career you pursue, as we’ll explore in just a few moments**.

* AEROSPACE ENGINEERING

Aerospace engineers are responsible for tasks and duties like developing and testing various aerospace equipment and products; establishing design criteria and quality standards; ensuring that projects are completed safely and on time; evaluating project proposals; and complying with regulations, such as environmental protection regulations..

* **MARINE ENGINEERING**

**According to the**[**Bureau of Labor Statistics**](https://www.bls.gov/ooh/architecture-and-engineering/marine-engineers-and-naval-architects.htm#tab-1)**, marine engineers — who are also referred to as marine mechanical engineers or marine design engineers, depending on the employer — are responsible for “designing buildingand maintain[ing] ships, from aircraft carriers to submarines and from sailboats to tankers.**

* **Automotive ENGINEERING**

**If you’re fascinated by technology and passionate about cars, consider merging your interests by exploring a career in automotive engineering — a branch of mechanical engineering that deals with the design, development, testing, and manufacturing of vehicles**

**ELECTRICAL ENGINEERING**

Electrical engineering is a broad subdiscipline of engineering that deals with the full spectrum of electrical and electronic parts and components, from radar, navigation, and communication systems to the electrical systems inside cars and airplanes. Electrical engineering jobs generally require a bachelor’s degree or higher, though a master’s degree will enable you to move into more competitive and specialized roles.

* **IT ENGINEERING**

Some typical job duties for an information technology engineer or IT engineer include, but are not limited to, identifying and implementing improvements to an organization’s computer systems; configuring systems and testing their performance; diagnosing and resolving systems-related issues; developing new software; and, potentially, managing other IT staff members

* Network engineering

Network engineers design, develop, and maintain a wide variety of network infrastructures, ensuring efficiency, connectivity, and optimal performance. For example, on a day-to-day basis, you might be responsible for handling tasks like installing routers and VPNs, upgrading systems and scheduling updates, backing up data, and making sure that networks are secure.

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