You might be wondering, what exactly is it that mechanical engineers do? Well, that's what we're here to answer. Mechanical engineering is a broad field, and there are many things that mechanical engineers do.

It's all about working with machines. They design, manufacture, analyze, and test devices and mechanical systems. They supervise the creation of many appliances, working on a large range of products. They look at problems and figure out the best way to solve them with mechanical apparatus, and when equipment fails, they inspect it to see what's wrong and do their best to figure out how to fix it.

Mechanical engineers often utilize computers during their work process to run simulations, test their work, design products, and develop the specific dimensions for needed parts.

They design all sorts of products, from electric generators and gas turbines to elevators and conveyor systems. It's one of the most expansive disciplines of engineering.

You may be wondering, what's the difference between a mechanic and a mechanical engineer? They are similar professions, both involving working with machines. However, mechanical engineers deal with the theoretical side of it, while mechanics are more hands on. In essence, mechanical engineers design and test products. They analyze, develop, and plan, in addition to troubleshooting and supervising installation. Mechanics inspect, repair, and build. They maintain things and work with their hands, and they're the ones to go to if you want something fixed or maintained. Mechanical engineers have more theoretical knowledge, while mechanics have more practical knowledge.

In terms of education, becoming a mechanic requires high school graduation, though additional education or degrees are preferred. It is also common for mechanics to get a certificate from the National Institute for Automotive Service Excellence. Mechanical engineers require a bachelor's degree in mechanical engineering or something similar, though higher degrees like a master's is beneficial. They may also seek to become professional engineers (PEs) through the Fundamentals of Engineering (FE) exam and the Principles and Practice of Engineeering (PE) exam, managed by the National Council of Examiners for Engineering and Surveying. (NCEES).

As for work environments, mechanics usually work in a shop, where they can repair things like vehicles. Mechanical engineers usually work in office settings, though they may travel to different locations for their work.