# Career paths for Mechanical Engineering students

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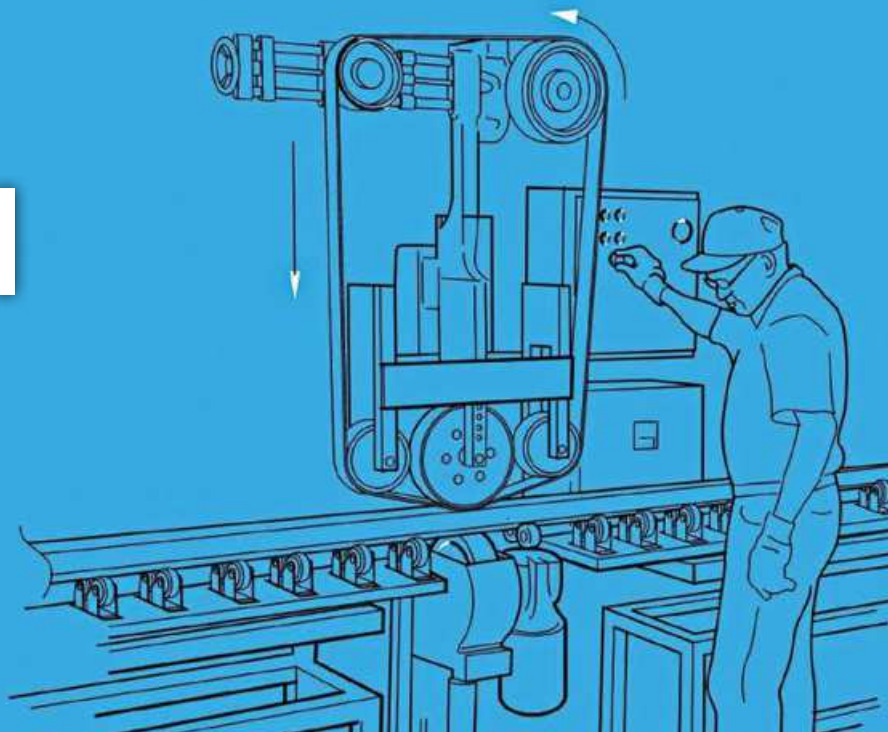
Mechanical Engineering is the category of engineering that combines physics phenomena with materials to analyse problems, develop, design, manufacture and investigate faults in machines.

Mechanical engineering tends to provide a broad understanding of the technical aspects, but also is versatile, thus allowing you to choose from an array of assorted career choices.

All public engineering institutions and some private universities in Bangladesh offer Mechanical Engineering degrees. Considering one of the most intriguing types of engineering, the following are a few of the careers that can be beneficial for aspiring mechanical engineers.

## MECHANICAL DESIGNER

A Mechanical Designer plays an integral role at the initiation of any project as their roles are intertwined with the planning process. They explore new ideas and draft the blueprints of instruments or products using software and tools like SolidWorks and AutoCAD.

Farzana Ahsan, a Mechanical Engineer graduate from MIST says, "Mechanical designers are crucial to the lifecycle of a product development process as the parts for productions are assembled based on the 3D models and prototypes they build."

Moreover, they have to formulate budgets and determine production costs accordingly.

Mechanical Designers also have the liberty to work as freelancers. Designers are required to have communicative and interactive skills as a key part of their job is to engineer requirements from the clients.

A good designer is likely to have excellent problem-solving skills, creativity, and analytical skills.

A Bachelor's degree in Industrial or Mechanical Engineering is a prerequisite for the profession.

## INDUSTRIAL ENGINEER

Industrial Engineers master in optimisation of processes and devise, build and implement optimised and efficient integrated systems. Industrial Engineering provides comprehensive vocational training on how to operate and comprehend machines and manufacture products with utmost efficiency, simultaneously minimising costs.

Industrial Engineers are often found in garments and manufacturing factories, where they also carry out responsibilities like managing the workforce and provide supervision and technical support.

A Bachelor's degree in Mechanical Engineering or Industrial and Production Engineering should suffice for said role. Many opt for an MBA as it provides insights into areas such as logistics, operations, and supply chain management.

## QUALITY CONTROL ENGINEER

A Quality Control Engineer functions in designing and implementing techniques best suited for the product development procedure. They furthermore monitor and control the services by contriving quality assurance indexes and devising tests and strategies for evaluation, documentation of materials, products and workforce updates and reporting while adhering to the guidelines and standards issued by the organisation. Troubleshooting problems having to do with quality and standards is also a bullet point in the job description.

A Bachelor's Degree in Mechanical or General Engineering is adequate; a Master's degree amplifies the chances of being recruited. Recruiters prefer candidates who possess analytical skills and are detail-oriented, with good data-entry and documentation skills.

## SUPPLY CHAIN MANAGEMENT PROFESSIONALS

Many engineers with a mechanical engineering major go for supply chain management. SCM is responsible for the planning, processing and management of raw materials and other various kinds of resources starting from supply to end products.

Although the job responsibilities are loosely related to the contents of mechanical engineering, many companies and factories hire engineers for their supply chain management departments because of their widespread material and equipment knowledge during purchasing.

For the smooth execution of projects in construction sectors, logistics and operation management over the recent years, there has been an exponential demand for supply chain management experts in every technological and development field. Dealing with vendors and distributors for the supply of parts and materials is amongst the daily responsibilities of supply chain managers; therefore communication plays a key role.

An MBA in supply chain or logistics management is frequently done as it complements a bachelor's degree in engineering.

## AUTOMOTIVE ENGINEER

An automotive engineer designs and analyses engines, fuel systems, brakes, and transmissions of cars and other vehicles. They invent and implement new technology in vehicles. Daily tasks primarily involve researching new technologies, generating production costs, building and testing on prototypes(therefore, creativity is a plus), and ensuring workplace safety.

Automotive engineering enthusiasts enter mechanical engineering programs because of the apparent parallels that these programs share, as only a few schools offer a degree in automotive engineering.

Currently studying mechanical engineering in MIST, Towhidul Islam talks about his career following graduation. "I have always wanted to pursue my career in the automotive industry. Courses like mechanics of materials and heat transfer help to acquire fundamental knowledge about automobile systems," he says.

"Moreover, I think CAD and simulation play a vital role, not only in automotive engineering but in mechanical engineering as a whole. Thus, it is imperative to possess these software skills along with theoretical knowledge," he adds.

Brilliant mechanical skills, proficiency in mathematics, time management, and being able to solve problems preemptively will help you land an entry-level job in automotive engineering.

With Bangladesh extending deeper into the automotive industry by bringing its first home-produced vehicle, Bangladeshi engineering students can anticipate a subsequent growth in automotive jobs, just around the corner.