

# Mechanical Engineers



**Also called:** Design Engineer, Product Engineer, Mechanical Design Engineer

## What they do:

Perform engineering duties in planning & designing tools, engines, machines, & other mechanically functioning equipment. Oversee installation, operation, maintenance, & repair of equipment such as centralized heat, gas, water, & steam systems.

## On the job, you would:

- Read & interpret blueprints, technical drawings, schematics, or computer-generated reports.
- Assist drafters in developing the structural design of products using drafting tools or computer-assisted design (CAD) or drafting equipment & software.
- Research, design, evaluate, install, operate, & maintain mechanical products, equipment, systems & processes to meet requirements, applying knowledge of engineering principles.

## Knowledge

### Engineering & Technology

- product & service development
- design

### Math & Science

- arithmetic, algebra, geometry, calculus, or statistics
- physics

### Manufactured or Agricultural Goods

- manufacture & distribution of products

## Personality

People interested in this work like activities that include **ideas, thinking, and figuring things out.**

They do well at jobs that need:

- **Attention to Detail**
- **Analytical Thinking**
- **Dependability**
- **Initiative**
- **Cooperation**
- **Persistence**

## Wages

**\$** 37.77  
Per Hour  
78,546  
Per Year

## Skills

### Basic Skills

- thinking about the pros and cons of different ways to solve a problem
- listening to others, not interrupting, and asking good questions

### Problem Solving

- noticing a problem and figuring out the best way to solve it

### People and Technology Systems

- thinking about the pros and cons of different options and picking the best one
- figuring out how a system should work and how changes in the future will affect it

## Technology

You might use software like this on the job:

### Analytical or scientific software

- MAYA Nastran
- The MathWorks MATLAB

### Computer aided design CAD software

- Autodesk AutoCAD software
- SolidWorks CAD software

### Development environment software

- Ladder Logic
- Microsoft Visual Basic

## Abilities

### Math

- choose the right type of math to solve a problem
- add, subtract, multiply, or divide

### Ideas & Logic

- order or arrange things
- use rules to solve problems

### Verbal

- read & understand what is written
- listen & understand what people say

### Visual Understanding

- quickly compare groups of letters, numbers, pictures, or other things

## Education



Bachelor's  
Degree

## Job Outlook

**48** Annual  
Openings

**H3** High Wage,  
Skill, Demand  
Occupation