



# Safety Engineer

35

## Job Description:

Safety engineers look for ways to prevent accidents in the work place. This occupation is expected to experience much faster than average employment growth in the near future.

## Wages:

Average median yearly pay is about \$73,000 a year in Utah.

**Schedule:** Work full time, regular business hours when businesses are open – 8:00 a.m. – 5:00 p.m.



## Gross Monthly Income:

\$6,100

**Advancement:** Safety engineers advance to inspecting more complex or dangerous buildings. Product engineers advance to investigating more difficult accidents. Experienced safety engineers who have good people skills may become supervisors.

## Education & Experience:

- ◆ Completed High School
- ◆ Bachelor's degree in Engineering

## High

## School Courses:

- ◆ Drafting
- ◆ Manufacturing Systems
- ◆ Safety and First Aid
- ◆ Health

## Work Conditions:

- ◆ Are responsible for the health and safety of others.
- ◆ Usually work as part of a team.
- ◆ Must be exact in their work. Errors could seriously endanger the health of others.
- ◆ Sometimes placed in conflict situation in which others may become rude or angry.

**Travel:** Light travel to work sites

## Job Outlook:



Small

## Hours a Week:

40

## Leisure Time:

Medium

## Knowledge:

- ◆ Engineering & Technology
- ◆ English Language
- ◆ Public Safety & Security
- ◆ Mathematics
- ◆ Design
- ◆ Law, Government, & Jurisprudence
- ◆ Administration & Management
- ◆ Building & Construction

# Safety Engineer

35



## Overview

A study performed in 2001 found that for every \$1 companies spent on work place safety, \$3 was saved. Employees missed less work and productivity increased. In turn, companies spent less money on insurance and were able to produce more of their products or services. In addition, employees felt better about their jobs and were less likely to quit, saving employers the costs of hiring and training new workers. Therefore, you might say that everyone wins when safety is ensured.

Industrial safety and health engineers make sure work places are safe. They inspect buildings and machines for hazards and safety violations. Engineers also monitor the general work environment. They test the air and water quality, noise levels, and temperature. When accidents occur, engineers investigate them and write reports of their findings. These reports usually include a plan for preventing or correcting unsafe conditions. Engineers make sure these programs get set up. They may train workers to use safety equipment and clothing. They also recommend ways to fix problems, and may install the safety devices themselves. For some companies, safety engineers design special safety clothing or safety devices for machinery.

Some safety engineers specialize in fire prevention. They study buildings to evaluate how quickly fires would spread through them. For example, they analyze the design of buildings, the materials they are made from, and the items stored in them. Engineers use this information to determine where to place fire extinguishers, sprinklers, detectors, and emergency exits. They may train staff how to fight fires in their buildings. They may also analyze the causes of fires so they can determine how to prevent future fires. In addition, fire safety engineers must know their city's fire protection laws.

Other safety engineers specialize in product safety. They make sure companies design products that are safe. For example, they make sure the slats in cribs are close together so that babies cannot get their heads caught. Product safety engineers conduct research on products to make sure they are safe. They also investigate accidents and write reports about their findings. Based on their research, engineers recommend how companies can change their product designs. Some safety engineers work for companies and develop safety instructions for products.

Pathway:

***Technology &  
Engineering***