What Health and Safety Engineers Do

Health and safety engineers develop procedures and design systems to keep people from getting sick or injured and to keep property from being damaged. They combine a knowledge of health or safety and of systems engineering to make sure that chemicals, machinery, software, furniture, and other products are not going to cause harm to people or buildings.

Health and safety engineers also investigate industrial accidents, injuries, or occupational diseases to determine their causes and to see whether they could have been or can be prevented. **1**_____

Health and safety engineers are also active in two related fields: industrial hygiene and occupational hygiene.

In industrial hygiene, they focus on the effects of chemical, physical, and biological agents. They recognize, evaluate, and control these agents to keep people from getting sick or injured. **2**_____

In occupational hygiene, health and safety engineers investigate the environment in which people work and use science and engineering to recommend changes to keep workers from being exposed to sickness or injuries. **3**_____For example, they might observe that the noise level in a factory is likely to cause short-term and long-term harm to workers and recommend ways to reduce the noise level through changes to the building or by having workers wear strong headphones.

Health and safety engineering is a broad field covering many activities. The following are specific types of health and safety engineers:

Aerospace safety engineers work on missiles, radars, and satellites to make sure that they function safely as designed.

Fire prevention and protection engineers design fire prevention systems for all kinds of buildings. They often work for architects during the design phase of new buildings or renovations. They must be licensed, and they must keep up with changes in fire codes and regulations.

Product safety engineers investigate the causes of accidents or injuries that might have resulted from the use or misuse of a product. They propose solutions to reduce or eliminate any safety issues associated with products. **4**_____

Systems safety engineers work in many fields, including aerospace, and are moving into new fields, such as software safety, medical safety, and environmental safety. These engineers take a systemic approach to identify hazards in these new fields so that accidents and injuries can be avoided.

The text was adapted from http://www.bls.gov/ooh/architecture-and-engineering/health-and-safety-engineers.htm

<u>*Exercise*</u>

Complete the gaps 1-4 with the missing parts of the text A-D:

A For example, they might anticipate that a particular manufacturing process will give off a potentially harmful chemical and recommend either a change to the process or a way to contain and control the chemical.

B They help employers and employees understand the risks and improve working conditions and working practices.

C They interview employers and employees to learn about work environments and incidents leading up to accidents or injuries. They also evaluate the corrections that were made to remedy violations found during health inspections.

D They also participate in the design phase of new products to prevent injuries, illnesses, or property damage that could occur with the use of the product.

Health and Safety Engineers

Duties

Health and safety engineers typically do the following:

- Review plans and specifications for new machinery or equipment to make sure it meets 1_____
- Inspect facilities, machinery, and safety equipment to identify and correct potential 2_____
- Evaluate the effectiveness of various industrial control mechanisms
- Ensure that a building or product 3_____ health and safety regulations, especially after an inspection that required changes

- Install safety devices on machinery or direct the installation of these devices

- Review 4_____ and recommend 5_____

- Maintain and apply their knowledge of current 6_____, regulations, and industrial

  processes

Exercise

Complete the text with the appropriate words or phrases:

 - policies

- hazards

- safety requirements

- improvements

- employee safety programs

- complies with