



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Hazards Associated With Electric Current, and Voltage





Electrical Hazards

- Electrical hazards refer to the potential dangers and risks that are associated with electrical systems.
- These hazards can cause dangers such as burns, electrocution, arc flash, electric shock, and other serious injuries.
- In extreme cases, they can even lead to fires or explosions, posing a threat to life, property, and the overall safety of a place and its occupants.



IMPORTANT TO KNOW ABOUT HAZARDS



Working around electricity can be very safe on the job site when workers properly identify and control hazards. But, **inadequate training, lack of experience**, and failure to recognize potential hazards could result in electric shock or death.

The construction industry is most in danger from electrical hazards, accounting for [52% of all electrical fatalities in the US workplace](#).

Most of these incidents and fatalities were caused by direct worker contact with overhead [power lines](#) and contact with machines, tools, and hand-carried metallic objects.



IMPORTANT TO KNOW ABOUT HAZARDS



- One of the best ways to protect yourself against these dangers is through **awareness**.
- Knowing the potential risks associated with electricity allows you to take precautions to prevent electrical accidents and fatalities.
- Having this knowledge can also help you spot the signs of electrical hazards immediately for prompt action, thereby contributing to the overall [safety of the workplace](#).



Causes of Electrical Hazards

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Electrical hazards, while dangerous, can be prevented when you're aware of the factors that contribute to them. Here's a list of the most common causes of electrical hazards to watch out for:

- **Insufficient insulation** – Over time, electrical insulation can deteriorate due to wear and tear, rodents, or exposure to moisture. This degradation can lead to exposed wires and increase the risk of electric shock or short circuits.
- **Circuit breaker failure** – If the circuit breaker fails to trip during an overload, it loses its protective functioning, further increasing the risk of electrical hazards.



Causes of Electrical Hazards

Damaged electrical appliances – Loose connections, frayed wires, or cracked insulation can result in electrical malfunctions

Improper use of extension cords – Practices like daisy chaining and overloading can cause overheating and ignite electrical fires.

Inadequate maintenance – Failing to regularly inspect electrical systems, ignoring warning signs, or bypassing safety procedures can trigger severe electrical hazards over time.



THANK YOU