

Occupational Safety vs. Process Safety

safetymanagement.eku.edu/blog/occupational-safety-vs-process-safety

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Safety first is a common phrase in today's companies. People working in the fields of occupational safety and process safety are concerned with keeping people and their surroundings safe. But the two specialties are different in a variety of ways.

Occupational safety concerns people in the workplace. Process safety deals both with the workplace and surrounding areas. This comparison of occupational health and safety professionals is important to understand.

Both types of specialists work together to create a safe environment, and occupational health and safety professionals work in both fields. An online emergency management degree can help prepare people working in occupational health and safety careers like these for the decisions they will face in the workplace and beyond.

Occupational Safety vs Process Safety

Occupational safety and process safety are two separate disciplines with different approaches and skills.

"While the two approaches share many aspects, and both have a common goal of continual improvement in safety and safety culture, occupational safety and process safety differ in significant respects," said Kayla Whelehon in the article, "Occupational Safety versus Process Safety – What's the Difference?"

Often referred to as hard-hat safety, occupational safety is focused on the safety, health, and welfare of people at their workplace. It does not go beyond the workplace and deals with things such as personal protective equipment (PPEs), noise exposure, vehicle accidents, slips, trips, and falls.

Process safety goes beyond the confines of a workplace and into the surrounding community. Its focus is on the hazards involved with industrial processes and preventing catastrophic accidents from events such as the unintentional release of hazardous materials, fires, gas leaks, explosions, or structural collapses.

Facilities have both process and occupational safety issues.

What is Occupational Safety?

Occupational safety specialists try to prevent and deal with the consequences of small-scale incidents in the workplace. People are often more familiar with occupational safety issues than process safety.

When incidents happen, they are localized and contained, usually affecting only one worker at a time. Although occupational safety issues can be tragic, they usually involve only workers and their families. Occupational safety incidents happen often.

Occupational safety specialists might monitor walkways and stairwells to make sure they are maintained, conduct training, and create programs to maintain, clean, and test PPEs.

As their names imply, the Occupational Safety and Health Act, which says every employee in the United States has the right to safe and healthful working conditions, and the Occupational Safety and Health Administration (OSHA) deal mostly with occupational safety issues because their influence often does not extend outside of the workplace.

What is Process Safety?

In contrast with occupational safety, process safety is a big-picture discipline. The hazards and their severity hazards are often much greater than those in occupational safety.

People working in process safety often have engineering and management skills and are trying to prevent extreme safety issues that could have catastrophic results. They must consider the consequences of events on many levels, including human, environmental, and business, so process safety involves a broader range of people than occupational safety.

Process safety incidents can impact an entire community with multiple fatalities and injuries, property loss, and environmental damage.

Examples of process safety incidents include:

- The Chernobyl nuclear disaster in 1986 where the No. 4 nuclear reactor melted down, causing the release of airborne radioactive contamination and evacuation of more than 100,000 people.
- The BP Texas City refinery explosion in 2005 that killed 15 workers, injured 180 others, and severely damaged the refinery.
- The West Fertilizer Company explosion in 2013 that killed 15, injured more than 160, and damaged or destroyed 150 buildings.

According to the article "What is Process Safety?" process safety management focuses on several aspects of a facility, including:

- Design and engineering of facilities
- Hazard assessments
- Incident investigation
- Management of change
- Inspection, testing, and maintenance of equipment
- Effective process controls and alarms
- Operating and maintenance procedures
- Training of personnel

Luckily, process safety incidents happen at a much lower frequency than occupational safety incidents.

The Main Differences Between Occupational and Process Safety

The article "Ten Differences Between Process Safety and Occupational Safety" simplifies some of the differences between the two disciplines.

Occupational Safety	Process Safety
Protect workers	Protects both workers and public
Considers human level	Takes humans, environment, business into consideration
Focuses on changing behavior	Focuses on changing systems
Less expensive to implement	Expensive because of the large scale of investment

Occupational and process safety are equally important and need support from upper-level management.

The Costs of Occupational and Process Safety

Expenses are associated with both occupational and process safety, however costs associated with occupational safety tend to be lower than those with process safety.

"Process safety, though, is often misunderstood and overlooked by those external to its workings. It's expensive and it requires a high-level support system as well as complex technical knowledge. It needs clear and concise communication to succeed, whereas occupational safety affects us all and is more easily understood and accepted as necessary. However, due to its far-reaching effects, negligence in process safety can have a much wider impact," Whelehon said.

Process safety can lead to a redesign or the shutdown of a process and requires regular inspections and evaluations to ensure the proper functioning of a facility.

About Eastern Kentucky University's Online Master of Science in Safety, Security and Emergency Management Program

Eastern Kentucky University's online safety, security and emergency management degree program exposes students to the essential components of safety, security and emergency management. The program allows students to customize their experience through a Multidisciplinary Track or concentrations in Corporate Security Operations, Occupational Safety, or Emergency Management and Disaster Resilience. The concentrations are also available as stand-alone graduate certificates, independent of a master's degree.

EKU is accredited by the Southern Association of Colleges and Schools Commission on Colleges. For more information, contact Eastern Kentucky University now.

Recommended Reading

[Working as a Safety Consultant](#)

[Career Spotlight: Safety Coordinator](#)

[Disaster Mitigation: 4 Oil Spill Responses](#)

Sources

[Occupational Safety versus Process Safety – What's the Difference?: Bluefield Process Safety](#)

[Ten Differences Between Process Safety and Occupational Safety: IChemE](#)

[What is Process Safety?: Center for Chemical Process Safety](#)

[What Is the Difference Between Occupational Safety and Process Safety?: Safeopedia](#)