

# Industrial Health & Safety 4.0: AI, Wearables, and Predictive Analytics

## COURSE OVERVIEW

This course provides a comprehensive framework on how emerging technologies are transforming occupational health and safety (OHS) management in the era of digital industry. The curriculum elaborates on technical insight to design, implement, and manage data-driven safety systems that anticipate risks, monitor worker health, and enhance operational resilience. Participants will learn how to strategically integrate digital tools, predictive analytics, and real-time monitoring systems into industrial safety programs, fostering a culture of proactive safety and human-centered innovation.

## WHO SHOULD ATTEND?

This course is designed for Health, Safety, and Environment (HSE) officers, industrial safety engineers, plant managers, risk management and It is equally valuable for compliance officers, data analysts, occupational health specialists, safety consultants, corporate sustainability and ESG professionals, government and regulatory agency officials overseeing workplace safety.

## COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Explain the core concepts and applications of Industry 4.0 in modern health and safety management.
- Utilize wearables and IoT sensors for real-time tracking of worker health and environmental conditions.
- Employ predictive analytics to detect and prevent potential hazards using live and historical data.
- Integrate machine learning tools into safety, risk, and incident management processes.
- Ensure alignment with global standards on health, safety, and data protection.
- Establish a data governance framework for ethical, secure, and proactive safety management.

## KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- How AI, IoT, and wearable technologies are transforming industrial safety systems.
- The principles of predictive and prescriptive analytics for improving safety performance.
- How to use real-time sensor data for proactive incident prevention and response.
- The role of digital twins in monitoring plant safety and predicting equipment failures.
- How smart PPE provides continuous data for safety intelligence and decision-making.
- The ethical and regulatory aspects of data privacy and worker monitoring.
- Global best practices in AI-driven industrial safety and sustainability integration.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate.
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded.