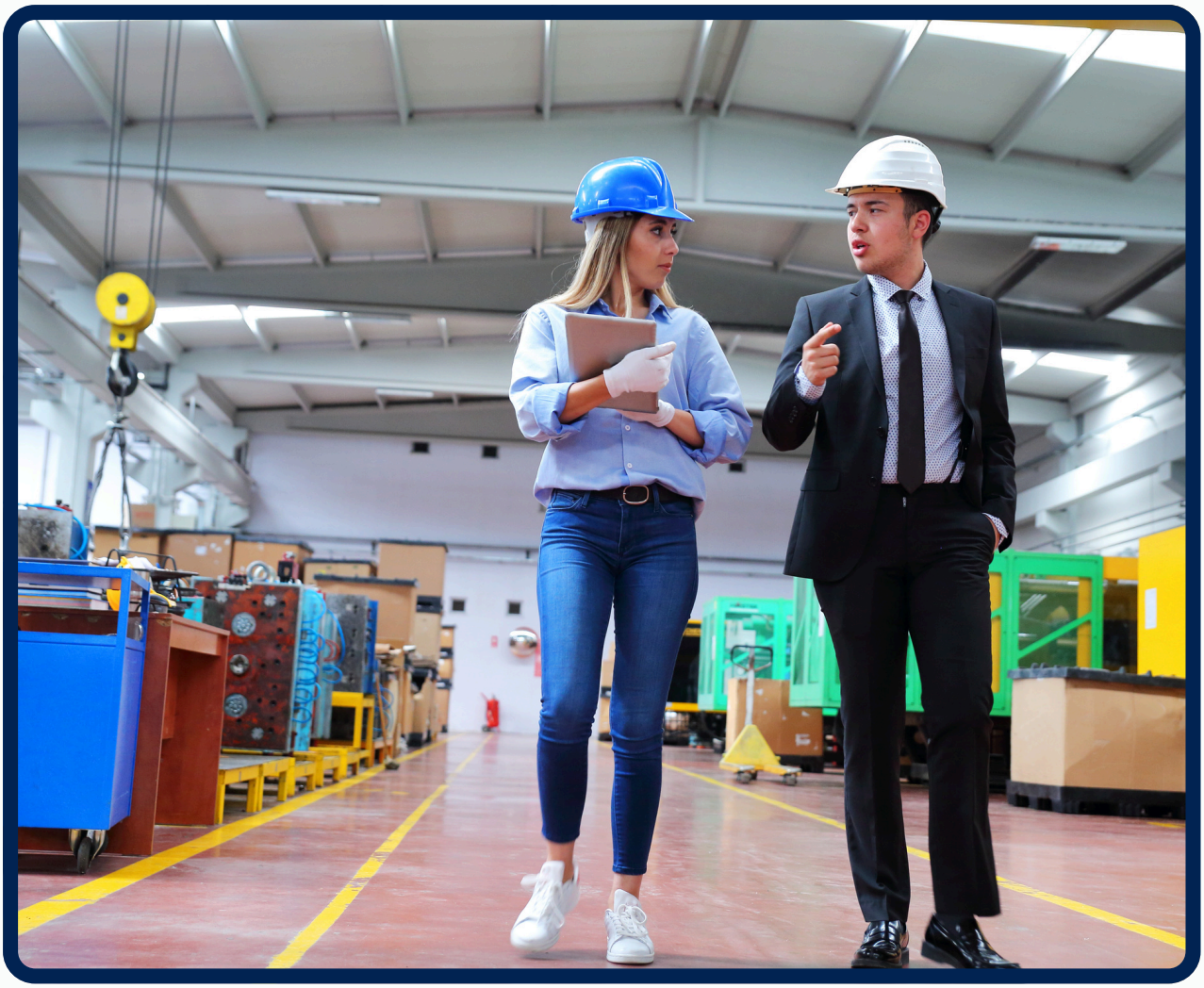
MeTec
EMPWER YOUR TECHNICAL SKILLS

PROCESS PLANT OPERATIONS: CHALLENGES AND BREAKTHROUGHS



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PROCESS PLANT OPERATIONS: CHALLENGES AND BREAKTHROUGHS

OVERALL DESCRIPTION:

This intensive course moves beyond the fundamentals to focus on real-world operational challenges and the cutting-edge solutions that are redefining the industry. We'll explore how to systematically identify and mitigate risks, enhance process efficiency, and leverage digital technologies to create a culture of continuous improvement. The content is grounded in practical case studies and best-practice frameworks, enabling you to apply new knowledge directly to your own plant's unique operational demands. This isn't just about managing a plant; it's about leading its evolution.

Course Objectives:

Upon completion of this course, participants will have the knowledge and skills to:

- Strategically assess and manage operational risks, from process safety to regulatory compliance.
- Implement advanced problem-solving techniques to improve plant reliability and uptime.
- Evaluate and integrate digital technologies, such as automation and data analytics, to optimize performance.
- Develop and champion a robust framework for operational excellence and asset integrity.
- Formulate a forward-thinking plan to adapt to emerging trends in sustainability and energy efficiency.

Course Outline:

Foundations of Operational Excellence & Process Safety Management

- Defining operational excellence in a high-risk environment.
- Systematic approaches to Hazard and Operability (HAZOP) studies.
- Best practices in risk assessment and control.

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Course Outline:

Optimizing Plant Performance and Reliability

- Root cause analysis and effective incident investigation.
- Applying reliability-centered maintenance (RCM) to critical assets.
- Strategies for maximizing yield and minimizing waste.

The Digital Plant: Automation and Data-Driven Decisions

- Introduction to Industry 4.0 concepts for process plants.
- Leveraging process data for real-time monitoring and predictive maintenance.
- The role of advanced process control (APC) in boosting efficiency.

Sustainable Operations and Future Trends

- Integrating sustainability goals into daily operations.
- Energy management and emission reduction strategies.
- The future of plant operations: human-machine collaboration and AI.

WHO SHOULD ATTEND?

This course is specifically designed for professionals who are responsible for or directly involved in the safe and efficient operation of process plants. This includes:

- Plant Managers and Operations Leaders
- Process and Chemical Engineers
- Operations Supervisors and Team Leaders
- Safety, Health, and Environment (SHE) Professionals
- Maintenance and Reliability Engineers
- Individuals seeking to transition into senior operational roles.

Course Methodology:

We utilize a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This training course will be conducted as a highly interactive workshop session. A variety of training methodologies will be used Before and during the course whenever applicable. Some of these methods are gamification, online pre-post test, role plays, self-assessment instruments, group exercises & case studies.