



# Process Plant Start-Up And Commissioning



## Introduction:

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Start Up and Commissioning of new plant and equipment presents both a major technical and management challenge. An organisation's personnel must familiarize themselves with new equipment, processes and technologies, develop the relevant operating and safety procedures.

This programme addresses in an integrated manner the key activities involved in the safe, effective and timely commissioning and start-up of a new plant or facility.

### In this programme you will learn:

- About the six key stages of the commissioning process
- How to balance the technical and management challenges of commissioning
- How to deal with machinery and equipment specific commissioning issues
- How to Manage Risks and Solve Problems during commissioning

## Who Should Attend?

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This programme addresses the needs of a diverse audience with an interest in Plant Start-up and Commissioning, including:

- General Managers who have oversight responsibility for Plant Start-up and Commissioning
- Operations and Maintenance Managers with direct line responsibility as well as staff support responsibility for delivering on effective Plant Start-up and Commissioning
- Plant Start-up and Commissioning Managers and Engineers
- Technical personnel involved in supporting Plant Start-up and Commissioning activities
- Supervisors and Engineers, both operations and maintenance who are involved or likely to be involved in Plant Start-up and Commissioning situations

## TRAINING METHODOLOGY:

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Process Plant Start-up and Commissioning is a hands-on, stimulating learning experience. The programme will be highly interactive, with opportunities to advance your opinions and ideas. Participation is encouraged in a supportive environment.

To ensure the concepts introduced during the programme are understood, they will be reinforced through a mix of learning methods, including lecture style presentation, open discussion, case studies, simulations and group work.

## PROGRAMME SUMMARY:

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The need for Plant Start Up and Commissioning is ongoing in any business that is growing, as new plant is added to expand capacity and to replace obsolete technology.

This programme aims to develop employees through exposure to the training and development experience provided by this programme, to build a "cadre" of knowledgeable and skilled staff who will be able to add value through their contributions to any situations involving plant start-up and commissioning.

They will be able to contribute in leadership or operational roles, both with knowledge and skills to ensure such projects are effectively and efficiently managed in a manner consistent with recognized best practices. A spin off benefit will be their ability to coach and impart learning to their peers and subordinates to the mutual benefit of individuals and organization.

## Course Objectives:

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### About the six key stages of the commissioning process:

- To develop and overall commissioning and plant start-up strategy
- To deal with machinery and equipment specific commissioning issues
- How to manage issues dealing with the commissioning of Electrical, Instrumentation and Utilities Systems
- To develop a overall commissioning management plan, resource plan and budget
- Troubleshooting and Problem Solving strategies which can be applied during commissioning
- How to manage risks associated with commissioning

## Course Outline:

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### DAY 1 - Introduction and Preparation

- Introduction to Process Plant Start Up and Commissioning
- Organization and Roles
- Supplementary Topics
- Cost Estimation
- Spare Parts Planning

### DAY 2 - Commissioning Strategy

- Commissioning Strategy
- Mechanical Completion & Integrity Checking

- Pre-commissioning and Operational Testing
- Start-up/Initial Operation, Testing and Acceptance

### **DAY 3 - Process Plant and Machinery Specific Issues**

- Process Plant and Machinery Commissioning
- Instrumentation and Control Systems
- Preparing and Isolating Process Plant

### **DAY 4 - Management, Planning and Control**

- The Start Up and Commissioning Planning and Control
- A Short-cut Approaches to Planning
- Progress Monitoring and Control
- Earned Value Analysis

### **DAY 5 - Managing Risks During Commissioning**

- Trouble Shooting and Problem Solving
- Risk Management
- Managing Safety and Quality

### **Conclusion**