

# GULF INSTITUTE



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# Commissioning & Start-Up with API RP 1FSC Foundation

## INTRODUCTION

- This Commissioning & Start-Up with API RP 1FSC Foundation training course will show you how to be successful in the defining phase of a project.
- Did you know that from the perspective of an investor, it is the Commissioning & Start-Up (CSU) phase that defines the project as a success or failure?
- When a project has been fully commissioned and started-up, it is likely the project will also be a financial success, with investors receiving their expected returns.
- When a project has not been fully commissioned and started-up, it is highly unlikely the project could ever be a financial success. From an investor's perspective, the project is a disaster.
- Why don't more people with many years of project experience already know this?
- It could be because the training and education to build essential skills and knowledge has not been there, and for many Operators and Contractors, still doesn't exist ... until now.

This training course answers crucially important questions and will highlight:

- What is Commissioning?
- What is Systems Completion?
- When and how should Construction transition from Areas to Systems?
- How should I perform as a Commissioning & Start-Up (CSU) team member or stakeholder?
- What does project Success or project Failure look like?
- What are the Critical Success Factors for Commissioning & Start-Up?

## OBJECTIVES

At the end of this training course you will learn how to:

- Achieve successful Commissioning & Start-Up (CSU) on any project
- Justify a budget for Commissioning & Start-Up (CSU)
- Apply the Systemization process and formulate the Start-Up sequence of priority Systems
- Perform Gap Analysis and know how to use the results
- Plan and execute specialist off-site Pre-Commissioning
- Persuade major stakeholders like Construction, successful in the Commissioning & Start-Up (CSU) process
- The overall learning objective is for course followers to become knowledgeable in Systems Completion and familiar with vital strategies for successful Commissioning and Start-Up of projects, on time and safely, embedded within the guidelines of API Recommended Practice, 1 FSC 1st Edition.

## TRAINING METHODOLOGY

- Training is conducted in a classroom setting to enhance learning outcomes for the students. With a focus on experiential and problem based training applying interactive methods, students are encouraged to reflect and feedback for the purpose of continuous learning and improvement.

## ORGANISATIONAL IMPACT

- Commissioning & Start-Up is not well understood, other than by those that are practitioners, however the successful outcome of your project is entirely dependent on it being performed well. The training provided in this course is unique and will equip your employees with the essential skills they will need to actively participate in Commissioning & Start-Up (CSU) or knowledgeably support the process as a stakeholder.

## PERSONAL IMPACT

At the end of this training course, you will learn how to:

- Achieve successful Commissioning & Start-Up (CSU) on any project by applying the critical success factors
- Justify a budget for Commissioning & Start-Up (CSU)
- Apply the Systemization process and formulate the Start-Up sequence of priority Systems
- Perform Gap Analysis and know how to apply the results
- Persuade major stakeholders like Construction, to be successful in the Commissioning & Start-Up (CSU) process

## WHO SHOULD ATTEND?

This training course is suitable to a wide range of professionals but will greatly benefit:

- Commissioning Managers
- Commissioning Engineers
- Commissioning Superintendents
- Commissioning Supervisors
- CSU Leads
- Process Engineers
- Maintenance Engineers
- QA/QC Engineers
- Technical Support Engineers
- Safety Engineers
- Field Operators
- Maintenance Technicians
- Safety Officers
- This training course is also highly recommended to all involved in Systems Completion, Pre-commissioning, Commissioning, Startup, and Hand-over process of new plants.

## Course Outline

### Course Overview and Phase 1 – Preparation

- Influence Curves and Planning
- Safety & Environmental Considerations
- Setting a Budget for CSU
- Gap Analysis

### Phase 1 – Preparation (Continuation)

- The Commissioning Manager & Commissioning & Start-Up (CSU) Team
- Risk Assessments
- Systemization, Completions Pyramid, Start-Up Sequence, Turnover Process

### Phase 1 – Preparation (Continuation)

- Introduction to Systemization, battery limits on P&IDs - Getting Stakeholder Agreement
- Introduction to System Priority Sequence for Initial Start-Up - Getting Stakeholder Agreement
- Dynamic Commissioning Procedures

## Phase 2 – Implementation

- Progress Tracking & Reporting
- Factory Acceptance Testing and Preservations
- Tags, Checksheets, Certificates and Punch Listing
- Specialist Subcontractors for Cleaning, Drying, Leak Testing and Oil Flushing
- Completions Pyramid and Turnover Process

## Phase 3 – Close out

- Pre-Start-Up Safety Review (PSSR) and Management of Change
- Handover to Operations
- Lessons Learned
- Planning for First Shutdown
- Critical Success Factors in Commissioning & Start-Up (CSU)

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