

API RP 1FSC Systems Completion and Start-Up Foundation Course

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Overview

API RP 1FSC Systems Completion and Start-Up Foundation Course is a one-week programme for commissioning, project, construction and operations-readiness teams who leave with a Systems Completion Execution Workbook. Participants structure facility systemization, completion planning, mechanical-completion verification, pre-commissioning, commissioning, start-up readiness, performance testing and handover. The course applies API RP 1FSC concepts without implying certification or endorsement. Agile Leaders Training Center develops practical control of completion evidence and interfaces.

Who Should Attend

- Commissioning and start-up engineers coordinating execution
- Project and construction engineers preparing systems for turnover
- Systems-completion coordinators managing records and status
- Operations-readiness teams accepting care, custody and control
- Quality, HSE and discipline leads verifying completion evidence

The course assumes basic project and facility knowledge. It does not replace project-specific procedures, technical operating instructions or authorized safety approvals.

Departments and Industries

The course supports capital-project transitions from construction through operational handover.

- Oil, gas, refining and petrochemical projects
- Power, utilities and industrial processing facilities
- Engineering, procurement and construction organizations
- Owner project, operations and maintenance teams
- Quality, completions and project-controls functions

Learning Objectives

By the end of this course, participants will be able to:

- Define systems, subsystems, boundaries and completion responsibilities
- Build a completion strategy aligned with the start-up sequence
- Verify mechanical-completion and pre-commissioning evidence
- Control punch items, turnover packages and readiness status
- Coordinate commissioning, start-up and performance-test interfaces
- Prepare a documented transfer to operations and project closeout

Course Agenda

Day 1: Systems Completion Strategy and Organization

- API RP 1FSC Purpose, Scope and Lifecycle Map
- System, Subsystem and Boundary Definition Method
- Completion Organization, Roles and Responsibility Matrix
- Start-Up Sequence and Systemization Alignment
- Systems Completion Execution Workbook Structure

Day 2: Construction Completion and Turnover Evidence

- Factory Acceptance Test and Receipt-Evidence Register
- Construction Completion Checksheet and Verification Route
- Mechanical Completion Certificate and Acceptance Criteria
- Punch Classification, Ownership and Closure Workflow
- Turnover Package Index and Documentation Status

Day 3: Pre-Commissioning and Commissioning Control

- Pre-Commissioning Scope, Cleaning and Test Matrix
- Energization, Isolation and Permit Interface Checklist
- Functional Test, Loop Check and Cause-Effect Evidence
- Commissioning Procedure Readiness and Constraint Review
- Care, Custody and Control Transfer Record

Day 4: Start-Up Readiness and Performance Testing

- Start-Up Readiness Review and Go-No-Go Criteria
- Operating Procedure, Training and Spares Readiness
- Start-Up Sequence, Hold Point and Communication Plan
- Performance-Test Boundary, Data and Acceptance Record
- Operations Assistance, Defect Control and Closeout Plan

Day 5: Integrated Systems Completion Application

- Exercise: Define Systems, Subsystems and Turnover Boundaries
- Exercise: Review Mechanical-Completion and Punch Evidence
- Exercise: Build a Pre-Commissioning and Commissioning Matrix
- Exercise: Conduct a Start-Up Readiness Decision Review
- Capstone Exercise: Complete a Systems Completion Execution Workbook

Practical Exercises

The course uses suggested activities that connect completion status with verifiable field and document evidence.

- Suggested activity: map system boundaries against the planned start-up sequence
- Suggested activity: audit a turnover package for missing or conflicting records
- Suggested activity: classify punch items and assign closure responsibilities
- Suggested activity: assemble the evidence for transfer to operations

FAQs

What is facilities systems completion?

It is the structured sequence used to verify construction, installation, integration, testing and preparation before systems are accepted for start-up and operations.

Does this course provide API certification?

No. The course uses API RP 1FSC as a professional reference and does not claim certification, accreditation or endorsement by API.

How are mechanical completion and commissioning separated?

Mechanical completion verifies that construction and installation meet defined requirements, while commissioning proves that systems function and interact as intended.

What belongs in a turnover package?

A turnover package typically organizes approved checks, test evidence, certificates, punch status, drawings, procedures and acceptance records for a defined system.

What practical output is completed?

Participants complete a Systems Completion Execution Workbook linking systemization, verification, punch control, turnover, commissioning, readiness and handover.

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Conclusion

Participants complete a practical framework for controlling the transition from construction to operations. The workbook makes boundaries, responsibilities, evidence, constraints and acceptance decisions visible. It supports disciplined coordination across project, commissioning and operations teams while allowing project-specific procedures and authority requirements to remain in control.

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