Total Building Commissioning Process Course

Venue Information

Venue: London UK

Place:

Start Date: 2026-05-26

End Date: 2026-05-30

Course Details

Net Fee: £4750.00

Duration: 1 Week

Category ID: CACETC

Course Code: CACETC-59

Syllabus

Course Syllabus

Course Description

Total building commissioning, a tool originally developed for HVAC systems, is being extended to all building systems: the current concept of total building commissioning. Its use is on the rise. Many major companies and government agencies now require the commissioning process on new construction and renovation projects. Owners of institutional, commercial and industrial buildings and large multi-unit residential buildings must use proven quality management tools and process systems that match their needs, meet their budgets and schedules, and reduce operating problems in new and renovated buildings or plants.

In this course you consider the primary goals of the building commissioning process: reduced building and process construction cost as well as increased quality and value. You also learn how to achieve these goals by introducing more effective planning and communication techniques that are applied from project conception through at least one year of building occupancy or process operations.

building systems, effective operations and maintenance manuals, and well-trained operating staff.

The total building commissioning process must integrate with other construction delivery methods, project management by the owner, bid and build design projects, agency construction management, and design-build. It enhances the existing skills of design, construction, and operating professionals. This course examines the relationship of commissioning to successful industrial processes and to sustainable and green building design, in addition to its primary focus on total building delivery.

Course Objective

To discuss what total building commissioning process is, why there is a need for it and how it differs from current procedures.To present how total building commissioning has been applied

Course Outline

The Total Building Commissioning Process – New Construction - Defined

- Definition of commissioning
- Benefits of the total building commissioning process
- Comparison to existing process of delivering constructed projects
- Vision versus passing the baton
- Putting the total building commissioning process puzzle together
- The commissioning process team
- Commissioning process versus commissioning, verifying and validating.
- Commissioning process versus contractor’s commissioning

Discussion Groups-Defining Process Needs

The Total Building Commissioning Process – Contracting Options

- Commissioning authority as owner’s representative
- Commissioning authority as contractor’s representative
- Responsibility for specifications
- Contractor as the commissioning agent
- Consultant as the commissioning agent

Developing the Owner’s Project Requirements in New Construction

- Needs assessment
- LEED Standards

Planning (Or Pre-Design) Phase Commissioning Tasks In New Construction

- Hiring a commissioning provider using Request for Qualification (RFQ) and or Request for Proposal (RFP) process
- RFQ/RFP Exercise
- Objectives
- How to set up and evaluate

- Scope
- Roles and responsibilities
- Scheduling
- Listing of tests, methods and processes
- Holdbacks
- Developing a commissioning plan
- Refreshments and Networking

Tender/Construction/Installation Phase - New Construction

- Respond to bidders questions
- Evaluate bid documents
- Participate in pre-construction meeting and or partnering session

New Construction – Construction Phase

- Scope meetings to finalize plan
- Relation to schedule
- Clarifying contractors' responsibilities, including testing agencies and manufacturers
- Clarifying definitions and steps: start-up vs. testing vs. verification
- Schedule off site commissioning tests as necessary
- To inspect or not to inspect
- Perform pre-test checklists and start up equipment as available to ensure readiness for functional testing during acceptance
- Sample form review
- Owner's familiarization and training

Review of New Construction Steps

- Conception or pre-design phase
- Design phase
- Construction/installation phase
- Verification phase
- Refreshments And Networking

Verification Phase New Construction

- Execute functional tests and diagnostics
- Modes of operation
- Testing whole systems
- Sample forms
- Fix deficiencies
- Retest and monitor as needed
- Operator training
- Review O&M manuals
- Building acceptance by owner

Post - Acceptance Phase New Construction

Investigation Phase Retro-Commissioning

- Perform site assessment
- Obtain or develop missing documentation
- Develop and execute diagnostic monitoring and test plans
- Analyze results
- Develop master list of deficiencies and improvements
- Recommend most cost effective improvements for implementation

Implementation Phase Retro-Commissioning

- Implement repairs and improvements
- Retest and monitor for results
- Fine-tune improvements as needed
- Revise estimated energy savings calculations
- Refreshments And Networking

Project Hand-Off And Integration Phase Retro Commissioning

- Prepare and submit final report
- Perform deferred tests (if needed)
- Develop re-commissioning plan/schedule