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BOROUGH HALL

CERTIFIED COMMISSIONING TECHNICIAN

CXT REFRESHER

ONLINE TRAINING BY KRISHNAJI PAWAR

LEED AP(BD+C), GSAS CGP, GCP, ISO 14001

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MODULE
5L5

CP Roles, Responsibilities & Professional Qualifications

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CERTIFIED COMMISSIONING TECHNICIAN CXT REFRESHER

The AABC Commissioning Group (ACG) is a non-profit organization that promotes the advancement of independent third-party commissioning professionals. They educate, train, and certify individuals as Certified Commissioning Authorities and Technicians, ensuring building systems function as intended, providing guidelines and standards in HVAC and building automation systems.

Learning Objectives

- **Course Overview and Introduction**
- **CxT's Technical, Communication, and Commissioning Skills**
- **HVAC Systems - Why is CxA of buildings necessary?**
- **Basics of field TAB , HVAC systems - Trained on jobsite safety and PPE**
- **CxCP roles, responsibilities, & qualifications**
- **Pre-function tests include sheet checking and installation tests.**
- **Point-to-point calibrate MEP and sensor systems.**
- **Verify TAB pre-functional tests and CxT responsibilities**



INTRODUCTION

- Commissioning is a quality-oriented process that ensures the design, installation, and functional testing of building systems.
- The commissioning team comprises various stakeholders with distinct roles and responsibilities.
- Developing the Commissioning Plan: The team is responsible for creating a comprehensive plan outlining the goals, scope, schedule, resources, and methodologies for the commissioning process.
- Defining Owner Requirements: The team engages with the building owner to understand and document their operational needs and expectations.
- Design Review and Coordination: The team conducts a thorough review of design documents to ensure alignment with the commissioning plan and the owner's requirements.
- Verification and Testing: The team verifies that installations adhere to the design specifications during the construction phase.
- Documentation and Reporting: The team maintains detailed records of the commissioning process, including test results, issues encountered, and resolutions implemented.
- Training and Handover: The team facilitates training for the facility management staff on the systems' operation and maintenance.
- Post-Occupancy Evaluation: The team may conduct post-occupancy evaluations to assess the performance of the systems in real-world conditions.

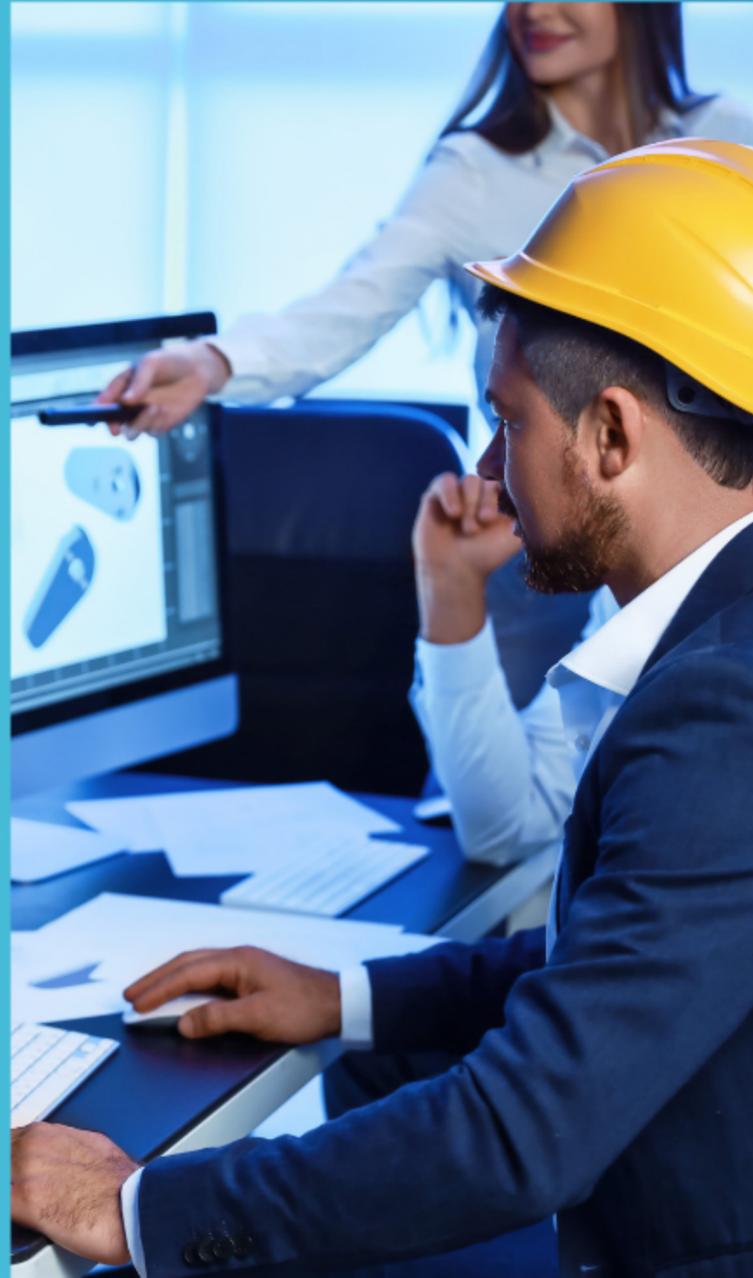
MANAGING INTERPERSONAL RELATIONSHIPS

- The commissioning process is a critical phase in project management, particularly in construction and engineering sectors.
- The commissioning team is a multidisciplinary group of professionals responsible for overseeing, managing, and executing the commissioning activities.
- The importance of interpersonal relationships in commissioning is highlighted.
- Strategies for relationship management include active listening, conflict resolution, and building trust and respect.





MENTORING AND TRAINING ON SYSTEMS AND PROCEDURES



- Mentoring is essential in commissioning, especially in projects involving new technologies and processes.
- Training programs should be structured to the specific systems and procedures used in the project.

Team Roles and Project Scope Throughout Project Phases

- Each team member has defined roles and responsibilities.
- These roles include the Commissioning Manager, Systems Engineer, and Field Technician.

COMMISSIONING PROJECT PHASES AND SCOPE

- The commissioning process typically unfolds across several project phases: design, construction, and occupancy.
- The commissioning team collaborates with the design team to establish performance criteria and review design documents.
- The construction phase ensures that systems are installed according to the specifications.
- The occupancy phase involves testing and validation of systems to confirm they operate as intended.



CONTRACTUAL ARRANGEMENTS AND RISK MITIGATION

- **Scope of Work:** Contracts outline specific tasks and deliverables expected from the commissioning team.
- **Payment Terms:** Understanding these terms is crucial for managing cash flow effectively.
- **Liability and Indemnification:** Contracts typically include clauses outlining the liabilities of each party and indemnification provisions to protect against losses or damages.



RISK MITIGATION STRATEGIES

- Early Identification of Risks: The team conducts thorough risk assessments during the planning phase.
- Regular Communication with Stakeholders: Regular meetings and updates facilitate proactive problem-solving.
- Contingency Planning: The team develops contingency plans that outline alternative strategies in case of unforeseen events.
- Performance Monitoring: Continuous monitoring of systems and processes during the commissioning phase allows for the early detection of issues.



ACG CERTIFIED COMMISSIONING CERTIFICATION

- Recognizes and validates independent building commissioning professionals' expertise.
- Verifies efficient operation of buildings by verifying all systems and components are designed, installed, tested, and operated according to owner's project requirements.
- Aligns with U.S. Department of Energy's Better Buildings program certification scheme.

Scope of CxA Program

- **Technical Skills:** Knowledge of building systems, energy efficiency measures, and performance testing.
- **Management Skills:** Effective project management, timelines, budgets, and stakeholder coordination.
- **Communication Skills:** Strong communication skills for collaboration among diverse project teams.

Practical Application of CxA Framework

- **Design Phase:** Facilitating workshops to review design documents and integrate energy efficiency measures.
- **Construction Phase:** Conducting regular site visits and inspections.
- **Post-Occupancy:** Monitoring system performance and user satisfaction.



COMMISSIONING PROVIDER SKILLS REQUIREMENT

- Maintains unbiased problem-solving and conflict resolution approach.
- Knowledge of HVAC systems, including design, control strategies, installation, operations, and maintenance.
- Experience in HVAC controls, including current technology.
- Practical background in field construction.
- Ability to organize specific activities into a coherent commissioning plan.
- Good communication skills, documentation proficiency.
- Experience in working with multidisciplinary teams.
- Familiarity with testing and balancing.



PURPOSE AND SCOPE OF ACG'S CXA / CXT

- The certification aims to establish a benchmark for professionals involved in the commissioning process.
- Eligibility criteria include experience, education, and training in engineering, architecture, or related fields.
- The certification involves passing a rigorous examination that assesses knowledge in various areas.



BENEFITS OF CXA CERTIFICATION

- Professional Recognition: Achieving the CxA certification signifies a commitment to excellence and professionalism in the field of building commissioning.
- Improved Project Outcomes: Professionals with CxA certification can effectively manage commissioning projects, leading to improved project outcomes.
- Networking Opportunities: Certification opens doors to networking opportunities within the commissioning community.



BENEFITS OF HIRING AN CXA

- Reduced Maintenance Costs: CxA identifies and addresses system issues early, preventing costly repairs and downtime.
- Increased Property Value: CxA ensures optimal building operation, increasing property value, especially beneficial for future property sales or leases.

Certification Requirements - ACG: AABC Commissioning Group

The CxA program recognizes independent building commissioning professionals who demonstrate the technical, management, and communications skills.



Benefits of the Certified Commissioning Authority (CxA) Exam Question Bank

- Assessment of knowledge before final exam.
- Access to over 820+ questions in 7 mock exams.
- Understanding reasoning behind each question and answer.
- Simulation exams cover CxA Exam Knowledge Domains.
- Familiarization with building commissioning and terminology.
- High chances of passing exam on first attempt.
- CxA Exam Flash Cards with over 108+ key terms.
- CxA_Engineering and HVAC design equations.





Attaining the CxA demonstrates:

- Gained knowledge and technical application of new construction commissioning process.
- Focused on professional growth and development.
- Enhanced professional credibility.
- Increased job opportunities.
- ANSI-accredited.
- Recognized by Department of Energy's Better Buildings® Workforce Guidelines program.
- Approved commissioning credential for federally funded projects.





KNOWLEDGE IS POWER

Who can benefit?

- Ideal for energy or commissioning professionals.
- Building professionals seeking understanding of commissioning terminologies and processes.
- Ideal for those starting their commissioning journey.
- Applicable to architects, energy engineers, MEP professionals, and building designers.



Learning Objectives

- Definition of commissioning
- History and meaning of building commissioning
- Why is construction commissioning essential?
- Learn Building Commissioning
- Professional Building Commissioning Certification
- Cost and benefits of building commissioning
- Summaries and Resources
- CxA Overview - CxA Exam 120+ Sample Questions





ACG'S CXA EXAM QUESTION BANK



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THANK YOU

