

GJA 5-day Syllabus Quality Control Inspectors (QCIs)

2023 Job Task Analysis (JTA)

Day 1: Introduction and Building Science Fundamentals

Morning Session:

- **Welcome and Orientation**
 - Introduction to the course and objectives
 - Overview of the QCI role and responsibilities
- **Building Science Basics**
 - Principles of heat transfer: conduction, convection, and radiation
 - Moisture dynamics and control

Afternoon Session:

- **Airflow and Pressure Dynamics**
 - Understanding air leakage and its impact on building performance
 - Building envelope and thermal barriers
- **Practical Exercise**
 - Hands-on demonstration of air sealing techniques

Additional Resources:

- **Building Science Corporation:** Offers a wealth of information on building science principles and best practices. [Visit the site1.](#)
- **Energy Star - Building Science:** Provides guidelines and resources on energy-efficient building practices. [Explore here2.](#)
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Day 2: Energy Efficiency Measures and Health & Safety Standards

Morning Session:

- **Insulation and Air Sealing**
 - Types of insulation and installation techniques
 - Air sealing methods and materials
- **HVAC Systems**
 - Overview of HVAC systems: types, efficiency, and maintenance

Afternoon Session:

- **Health and Safety Standards**
 - OSHA regulations and workplace safety
 - Indoor air quality standards (ASHRAE 62.2)

- Hazardous materials identification and handling
- **Practical Exercise**
 - Using personal protective equipment (PPE)

Additional Resources:

- **U.S. Department of Energy - Energy Efficiency:** Comprehensive resources on energy efficiency measures and technologies. [Learn more3.](#)
- **Occupational Safety and Health Administration (OSHA):** Guidelines and resources on workplace safety and health standards. [Access OSHA resources4.](#)
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Day 3: Codes and Standards

Morning Session:

- **International Code Council (ICC) Codes**
 - Overview of IBC, IRC, IECC, and their applications
- **National Fire Protection Association (NFPA) Codes**
 - Understanding NFPA 1, NFPA 70, and their relevance

Afternoon Session:

- **Local Building Codes and Regulations**
 - Navigating local codes and compliance requirements
- **Standard Work Specifications (SWS)**
 - Guidelines for energy efficiency measures and quality control

Additional Resources:

- **International Code Council (ICC):** Access to various building codes and standards. [Visit ICC5.](#)
- **National Fire Protection Association (NFPA):** Information on fire safety codes and standards. [Explore NFPA6](#)

Day 4: Inspection and Testing Procedures

Morning Session:

- **Visual Inspections**
 - Conducting thorough visual inspections
 - Identifying common issues and defects
- **Diagnostic Testing**
 - Blower door tests and duct leakage tests
 - Using infrared thermography

Afternoon Session:

- **Combustion Safety Testing**
 - Procedures for testing combustion appliances
 - Ensuring safety and compliance
- **Practical Exercise**
 - Hands-on practice with diagnostic tools

Additional Resources:

- **Blower Door Testing Guide:** Detailed guide on conducting blower door tests. Read the guide.
- **Infrared Training Center:** Offers courses and resources on using infrared thermography for building inspections. Visit ITC.
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Day 5: Documentation, Reporting, and Practical Experience

Morning Session:

- **Documentation and Reporting**
 - Accurate data collection and record-keeping
 - Preparing detailed inspection reports
- **Communication Skills**
 - Effectively communicating findings to stakeholders

Afternoon Session:

- **Field Inspections and Real-World Applications**
 - Conducting field inspections under supervision
 - Applying learned skills in real-world scenarios
- **Mentorship and Feedback**
 - Receiving feedback from mentors
 - Discussing career advancement and certification process

Additional Resources:

- **Quality Control Inspector Job Description and Duties:** Detailed description of the roles and responsibilities of QCIs. [Read more.](#)
- **Factored Quality - In-Depth Guide to Quality Control Inspections:** Comprehensive guide on conducting quality control inspections. [Explore the guide.](#)