



## Advanced Residential HVAC Education & Training

# System Performance & Air Balancing Certification Program

Want to set your HVAC service company apart from your competition? Are you ready to move beyond the SEER and AFUE trap?

Did you know an estimated 50% of new HVAC equipment installations result in little or no energy saved, and even more end up with unresolved comfort issues?

This training program provides the keys to delivering true system performance, leading to enhanced comfort, safety, and energy efficiency for your customers, plus greater revenues and profitability for your company.

NCI's two- and three-day HVAC System Performance and Air Balancing certification classes are designed to provide the right training for all your field personnel, including service technicians, installers, and sales people:

## Residential HVAC System Performance

**In this two-day certification class your field people will learn how to:**

- Discover and repair hidden energy-draining comfort system defects other companies miss every time
- Reduce call-backs and increase customer satisfaction
- Guarantee results using NCI's exclusive System Delivered BTU technology
- Test both new and existing installations
- Provide real solutions through system renovations and documented results.

## Residential Air Balancing

**Provide Certified Air Balancing on your installations with this additional day of training and certification:**

- More HVAC and energy professionals are discovering the importance of testing and balancing their installations for maximum system comfort and efficiency.
- Many building departments and utility programs now require balancing reports.
- Your ability to air balance your customers' HVAC systems will keep you ahead of the competition!



**Courses Qualify for  
NATE, BPI & Most  
State CEUs**



# Residential HVAC System Performance

## Benefits:

- Open the door to increased sales and customer loyalty through professional testing and diagnostic services
- Increase average equipment changeout tickets by 100% or more by uncovering and repairing hidden system defects that lead to reduced comfort and increased energy consumption
- Reduce warranty and call-back costs up to 70% by diagnosing and correcting the real problem the first time
- Improve system operating efficiency from an average of 57% to over 90% - with the ability to prove your results to your customers
- Enhance profitability by selling highly profitable services at gross margins generally exceeding 60%
- Use HVAC performance diagnostic techniques to identify and solve system performance issues, improve IAQ and reduce energy consumption
- Differentiate yourself in your marketplace as a true beyond-the box HVAC expert.



**Deliver high quality repair, maintenance and installation services, and produce professional reports and documentation to differentiate your company from your competition!**

## Agenda:

### Day 1 - The Key Elements of HVAC System Performance

- Review the typical service call and its shortcomings
- Overview of test methods to identify performance issues
- Test instruments review - the good, the bad, and the ugly
- Testing principles of static pressure, airflow, & temperature
- Verifying BTUs at the equipment and at the registers
- Airflow testing and verification methods
- Static pressure measurement - a key diagnostic tool
- Measuring dry bulb temperatures and diagnostic properties
- Understanding total system performance

### Day 2 - Diagnose and Improve Poor System Performance

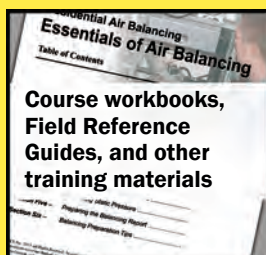
- Review of test methods, measurement, and calculations
- Temperature, humidity, and enthalpy measurement
- Equipment BTUs versus delivered BTUs at the registers
- Measuring airflow using NCI's 3 test methods: Static Pressure with Fan Tables, Balancing Hood, and Duct Traverse
- Rate operating HVAC system performance
- Sharing findings with customers in easy to understand terms
- Air distribution system renovation and repair

*The day concludes with NCI's exclusive Residential HVAC System Performance certification exam*

## NCI's Training & Certification Packages Include:



**Pre-Training materials to prepare you for the class**



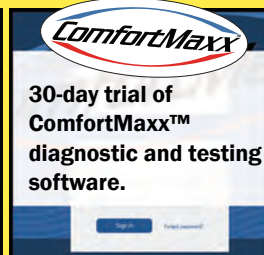
**Course workbooks, Field Reference Guides, and other training materials**



**Post Training exercises to jump start your field testing**



**Certificates and Wallet cards upon passing certification exams and field testing**



**30-day trial of ComfortMaxx™ diagnostic and testing software.**



**30 days of unlimited toll-free tech support**

**Register now and discover the Performance-Based Contracting™ Difference!**

## Residential Air Balancing

### Benefits:

- Enhance your company’s professional reputation with NCI’s exclusive nationally recognized Residential Air Balancing certification and establish yourself as the true air balancing expert
- Increase revenue and profitability by offering professional in-house balancing services at margins far exceeding the average service and equipment replacement margins
- Improve your ability to comply with new, tighter local, state, and federal building codes and energy requirements
- Reduce system performance issues and energy consumption while improving comfort, IAQ, and customer satisfaction
- Establish yourself as the go-to professional to solve long-standing problems.

**Perform your first balancing job immediately after completing the course!**

### Day 3 - Testing & Balancing Residential Systems

- History and purposes of balancing
- Measuring static pressure
- Using a balancing hood
- Performing an airflow traverse
- Preparing for a balancing project
- Setting fan airflow
- Air test and balance procedures
- Overcoming obstacles in the field
- Final testing and documentation

**The day concludes with NCI’s exclusive Residential Air Balancing certification exam**

*“NCI’s HVAC System Performance Training is one-of-a-kind! We need to stop focusing on the box and look at the system as a whole.”*

Juan Cardona,  
Technical Service  
Manager, Virginia Air

*“Just when I was becoming disenchanted with my industry, NCI opened my eyes to a new way, with performance-based outcomes, and I haven’t looked back since.”*

David Coziahr, Owner Coziahr Heating & AC

*“I use this training to better help customers decide how to save energy and money by improving their comfort systems.”*

Mike Muras, Owner  
M & K Electrical  
Plumbing Heating  
& Air

## Frequently Asked Questions

### Q: What kind of certification do I earn?

NCI’s Residential HVAC System Performance and Residential Air Balancing certifications are among the most recognized certifications in our industry. These certifications are valid for two years. Recertification is achieved with eight hours of NCI continuing education.

### Q: Are there any pre or post-training tools or requirements?

Prior to each class, students will receive related class preparation materials. As part of the certification process, each student will be required to complete testing based on the specific certification.

### Q: What are the start and end times of the class and is lunch included?

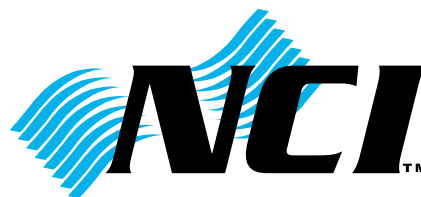
The typical NCI training day is 8:00 am to 5:00 pm. Light refreshments and lunch are included.

## Who is NCI?

NCI (National Comfort Institute) is the world leader in HVAC System Performance training and Air Balancing. We created the industry's best practices, processes, and forms and have been teaching them for two decades!

What makes NCI's approach different? We show you how to thoroughly test and diagnose the system using practical, easy-to-follow methods so you'll know exactly what to do to provide your customers with optimum comfort, indoor air quality, and energy efficiency.

NCI coined the phrase “Performance-Based Contracting™”, a unique approach to managing a contracting business through accountability and measurable results. During the past two decades, NCI has trained and certified more than 25,000 HVAC industry professionals. For more information about NCI, please call 800-633-7058 or visit [www.nationalcomfortinstitute.com](http://www.nationalcomfortinstitute.com).



## Additional Educational Opportunities from NCI:

- **Carbon Monoxide Safety & Combustion**
- **Residential HVAC System Redesign & Renovation**
- **Performance-Based Selling**
- **Commercial Air Balancing**
- **Home Performance for HVAC Professionals**
- **Online Training (NCI University)**
- **Large Commercial Balancing (NBC)**
- **Webinars**
- **Onsite Training & Coaching**



**Call 800-633-7058**



PO Box 147  
Avon Lake, OH 44017

**GET TWO NCI  
CERTIFICATIONS  
WITH 3 DAYS OF  
TRAINING!**  
(With successful  
completion of  
all testing)



## Residential HVAC System Performance and Air Balancing Education & Training



**Offer Homeowners Comfort and Energy  
Efficiency Solutions That Really Work**

