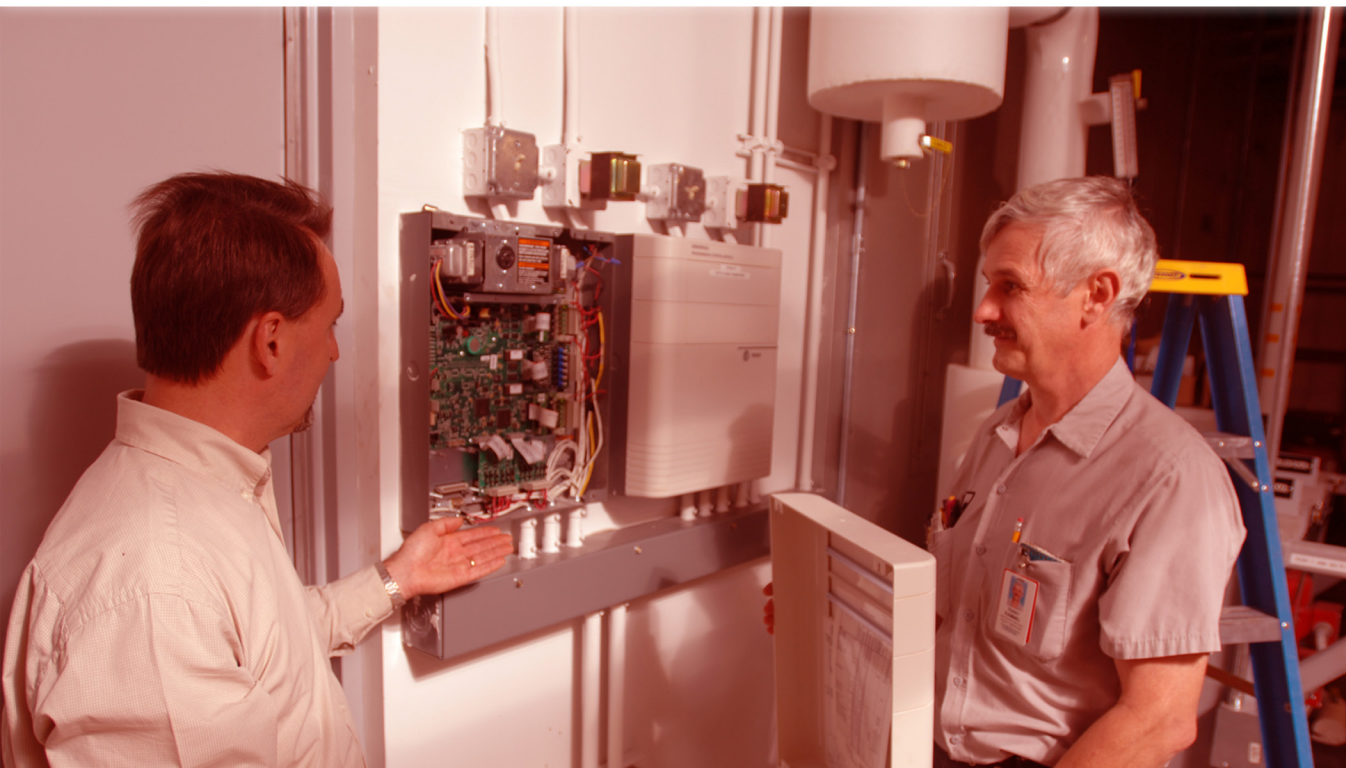


Making your building, and the lives within, better ... for life.

Maryland - Pennsylvania 2016 Contractors Training Catalog



General Information

Maryland - Pennsylvania Trane provides indoor comfort systems and energy efficiency solutions for commercial, industrial and institutional applications. We are pleased to provide you with a full schedule of HVAC educational programs at our local offices.

Descriptions and details of each course are provided in the following catalog. We will provide your team with a real world education on the latest innovations in HVAC equipment and controls systems including operation and maintenance procedures for owners, engineers, property managers and contractors.

We work hard to provide you with the highest quality training for your dollar.

Tuition includes instruction, materials and catered continental breakfast and/or lunch. Payment must be received prior to class. Registration is available by mail, email, fax or phone.

Dates are subject to change. We reserve the right to cancel any class due to class size, weather or illness. All students will be notified as early as possible, ideally prior to billing.

Cancellation Policy: You may cancel up to 72 hours before class and tuition will be refunded less a \$35 registration fee. **Cancellations in less than 72 hours and “no shows” will not be refunded.**

Trane is an approved provider of Maryland and Pennsylvania professional development licensing boards. The courses offered have been approved for Continuing Education Units (CEU's). At the end of each qualified course, attendees will receive a certificate of completion.

Maryland - Pennsylvania Trane Training Locations

Baltimore

10947 Golden West Drive, Suite 100
Hunt Valley, MD 21031

Harrisburg

3909 TecPort Drive
Harrisburg, PA 17111

Pittsburgh

400 Business Center Drive
Pittsburgh, PA 15205

Wilkes Barre

1185 North Washington Street
Wilkes Barre, PA 18705



If you would like more information, have questions or would like to register for a training course, please contact **Rebecca Hall**, Marketing Coordinator, at **717-561-5415** or email **rebecca.hall@trane.com**.

Course Descriptions

Refrigeration Fundamentals and Update (including R-410A)

Course Number: *RF1*

One Full Training Day - 8a.m. to 5p.m. (with continental breakfast & lunch included)

Baltimore: February 16, 2016

Harrisburg: January 11, 2016

Pittsburgh: September 27, 2016

Wilkes Barre: September 13, 2016

After an overview of a typical refrigeration cycle, there is a discussion on how various problems impact the operation and pressures in the refrigeration system. The changes to the trade resulting from EPA regulations are covered, including refrigerant phase-out and their typical replacements, working with blends and R-410A, service procedures to meet the new regulations, procedures for using the new refrigerants and oils, and the new machine room requirements. Typical service procedures are covered, including using the manifold gauges, T-P chart, leak detection, seasonal startup, pumping the system down, refrigerant recovery, pressurizing the system, evacuation and adding refrigerant.

Audience: Building Owners, Facility Managers/Operators, Contractors

Tuition: \$300.00 per person

Variable Air Volume & VariTrac Controls

Course Number: *VTC7*

One Full Training Day - 8a.m. to 5p.m. (with continental breakfast & lunch included)

Harrisburg: February 4, 2016

Wilkes Barre: March 16, 2016

This course is designed to promote an understanding of variable air volume (VAV) and the concept of air movement and discusses the different concepts in equipment and design. This course also introduces the systems, valves, control and zone control. Early pneumatic styles up to early electronic boards are covered as well as the newer style of boxes along with their electronic controls. VariTrac is used to turn small constant volume commercial systems into VAV. VariTrane and VariTrac boxes are used in both configurations.

Audience: Building Owners, Facility Managers/Operators, Contractors

Tuition: \$300.00 per person

Course Descriptions

Arc Flash Safety Training

Course Number: *AFT1*

One Full Training Day - 8a.m. to 5p.m. (with continental breakfast & lunch included)

Baltimore: May 10, 2016

Harrisburg: May 24, 2016

Pittsburgh: October 18, 2016

Wilkes Barre: October 4, 2016

This course is designed to show how the National Electric Code (NEC) the NESC & OSHA ties together and learn new NEC codes that will affect the working environment. Additionally, students will gain a full understanding on NFPA 70 E safe work practices and learn about SCCR ratings, Arc Flash, Arc Blast, cal/cm², and energy levels. Finally, the course will cover an understanding of OSHA, who is qualified, what training is required and what PPE students should be using as part of their everyday routine. Students will walk away from the class knowing NFPA 70 E Electric Safe Work Practices in a method that can be used to keep your life safe and still be a viable work practice.

Audience: Building Owners, Facility Managers/Operators, Contractors

Tuition: \$300.00 per person

Electrical Troubleshooting with Schematics

Course Number: *ETS3*

Two Full Training Days - 8a.m. to 5p.m. (with continental breakfast & lunch included)

Baltimore: February 17 - 18, 2016

Harrisburg: January 12 - 13, 2016

Pittsburgh: September 28 - 29, 2016

Wilkes Barre: September 14 - 15, 2016

After review of the electrical fundamental concepts, attendees will learn the operation of various electrical components used in HVAC systems and procedures for troubleshooting them. This course promotes the concept of troubleshooting and repairing systems using meters with schematic and wiring diagrams. Equipment covered includes circuits, relays, contactors, motor starters, transformers and more. Advanced concepts include ohms law, use of HVAC symbols, schematic reading and others.

Audience: Building Owners, Facility Managers/Operators, Contractors

Tuition: \$550.00 per person

Note: Hotel and transportation **not included**.

Course Descriptions

Trace 700 Design Analysis Software Training

Course Number: *TDA*

Three Full Training Days - 8a.m. to 5p.m. (with continental breakfast & lunch included)

Students May Select One, Two or All Three Days of Training

Baltimore: April 12 - 14, 2016

Trace 700 Load Design - *April 12* - Course Number TDA-1: Students will learn how to use Trace 700 Load to complete complex building and load calculations for virtually any building. This course is best for beginner to advanced users.

Trace 700 Energy Analysis - *April 13* - Course Number TDA-2: This course compares the energy and economic impact of various building alternatives. This course is best for intermediate and advanced users; students are expected to be familiar with the skills and concepts presented in Trace 700 Load Design.

Trace 700 & ASHRAE 90.1/LEED - *April 14* - Course Number TDA-3: This course will promote an understanding of how to utilize Trace 700 for LEED Energy & Atmosphere Credit 1 analysis through the Performance Rating Method detailed in ASHRAE Standard 90.1-2004 and 2007. This course is best for advanced users; students are expected to be familiar with the skills and concepts taught in both Trace 700 Load Design and Trace 700 Energy Analysis.

Audience: Architects, Consulting Engineers, Design Contractors

Tuition: \$300.00 - 1 Class
 \$500.00 - 2 Classes
 \$750.00 - 3 Classes

Note: Hotel and transportation **not included**.

Course Descriptions

Voyager Operations

Course Number: *VOY3*

One Full Training Days - 8a.m. to 5p.m. (with continental breakfast & lunch included)

Baltimore: January 26, 2016 **Pittsburgh:** November 7, 2016

This workshop is designed to familiarize participants with the Voyager Rooftop Unit, specifically Commercial 3 through 50 ton rooftop air conditioner with VAV or CV controls. This course focuses on installation, operation and maintenance. Also included are system troubleshooting, microcontrols, ignition and combustion.

Audience: Building Owners, Facility Managers/Operators, Contractors

Tuition: \$300.00 per person

Engineers Newsletter Live

1 to 1.5 hour seminar, with either breakfast or lunch included.

Delivering Performance from Airside Economizers

March 2016 - Course #ENL1

DIY Chiller Plant Performance Modeling: Easy and Easier

May 2016 - Course #ENL2

New Fan Efficiency Regulations & Fan Technology Advances

September 2016 - Course #ENL3

Acoustics in Outdoor Applications

October 2016 - #ENL4

Save the date for our **Engineers Newsletter Live Series** where Trane experts provide a 1 to 1.5 hour seminar on each topic listed above. *Details for each seminar to follow.*

Audience: Architects, Building Owners, Consulting Engineers, Technicians, Facility Operators, Contractors

Tuition: Complimentary



Registration Form

Attendee Name: _____ Email: _____

Contact Name & Email (if different from above): _____

Company: _____

Company Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ FoodAllergy/Restriction?: _____

Please register me for the following course(s):

Course #	Location (B/H/P/W)	Date	Tuition
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Payment Method:

* If you have a Trane account number, please list here: _____

_____ Check Enclosed ... *Payable to "Trane"*

_____ Credit Card ... **Must** Pay through Account Track Online

_____ Bill My Company ... PO# _____

**Register by email to rebecca.hall@trane.com,
via fax to 717-561-5499, call 717-561-5415 or mail to:**

MD-PA Trane, Training Dept.
Attention: Rebecca Hall
3909 TecPort Drive - Harrisburg, PA 17111

After registration is recieved & processed, **confirmation will be sent to the listed email address(es).**

Questions? Contact Rebecca Hall at rebecca.hall@trane.com or call 717-561-5415 **7**