



MARYLAND-PENNSYLVANIA TRANE

Educational Training Course Catalog

2019 Edition



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 light 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. At the conclusion of each course, attendees will receive a Certificate of Completion.

MARYLAND-PENNSYLVANIA TRANE TRAINING LOCATIONS

Allentown, PA

5925 Tilghman Street, Suite 300
Allentown, PA 18104

Harrisburg, PA

3909 TecPort Drive
Harrisburg, PA 17111

Hunt Valley, MD

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

Pittsburgh, PA

400 Business Center Drive
Pittsburgh, PA 15205

Wilkes Barre, PA

1185 N. Washington Street
Wilkes Barre, PA 18705

*For more information on any of these training courses, please contact
Rebecca McCoy at rebecca.hall@trane.com or 717.561.5415*

Course Information

CENTRAVAC SYSTEM OPERATION & MAINTENANCE

Course Number: *CTV1*

Pittsburgh: March 19 - 20, 2019

Hunt Valley: October 8 - 9, 2019

Two Full Training Days - 8:00 a.m. to 5:00 p.m.

This course will familiarize owner maintenance supervisors and technicians with Trane CenTraVac CVHE/F/G/L/M and the new CVHS oil-less centrifugal chiller operation and maintenance requirements. It will assist them in understanding chilled water systems and load-based chiller dynamics. The course will help technicians troubleshoot and will help chiller owners decide if work can be done in-house or not. Technicians can particularly benefit from coverage on diagnosing and maintaining machine design performance, and learn what can occur if operating outside of these parameters.

Instructor: Trane University

Audience: Building Owners, Facility Managers, Facility Operators, Maintenance Technicians

Tuition: \$600.00

CHILLED WATER SYSTEMS SERVICE

Course Number: *CWS1*

Harrisburg: September 24 - 25, 2019

Two Full Training Days - 8:00 a.m. to 5:00 p.m.

This course is intended to provide attendees with a “systems” approach to maintaining and diagnosing problems involving chilled water piping systems from a service perspective. It will show technicians and supervisors how Trane utilizes water flows to obtain efficient chiller operation. The course will also discuss water system conditions that can be detrimental to efficient operation and possibly damaging to system components. Students will take flow measurements in a laboratory setting, using recommended tools and techniques to determine chilled water system performance. Chilled water system types such as decoupled loop, variable-primary flow and others will be discussed.

Instructor: Trane University

Audience: Building Owners, Facility Managers, Facility Operators, Maintenance Technicians

Tuition: \$600.00



Course Information

ELECTRICAL TROUBLESHOOTING FOR HVAC

Course Number: *ETH2*

Hunt Valley: February 5, 2019

Pittsburgh: April 2, 2019

Allentown: October 29, 2019

One Full Training Day - 8:00 a.m. to 5:00 p.m.

After an overview of electric terminology, the attendees will learn the operation of various electrical devices used in HVAC systems and the procedures for troubleshooting those devices. This course incorporates principles of relays and other wiring mechanisms and covers the basic principles of reading schematic wiring diagrams. The attendees will become familiar with HVAC electrical devices, circuits and will be able to use this knowledge to troubleshoot electrical controls and electrical systems in order to repair them.

Instructor: Elmer Franklin

Audience: Building Owners, Facility Managers, Facility Operators, Contractors

Tuition: \$350.00

INDOOR AIR QUALITY

Course Number: *IAQ3*

Wilkes Barre: March 25, 2019

Harrisburg: April 29, 2019

Pittsburgh: October 22, 2019

One Full Training Day - 8:00 a.m. to 5:00 p.m.

This course brings to light the factors that affect indoor air quality or IAQ. It covers how to discover if a facility has a potential IAQ problem, how to prevent potential IAQ issues and how to remedy issues that already exist. Attendees will learn how to deal with problems and concerns of employees and the public with effective communications. Includes a 229-page IAQ guide from the United States EPA.

Instructor: Nelson Warthan

Audience: Building Owners, Facility Managers, Facility Operators, Contractors

Tuition: \$350.00

Course Information

PRECEDENT & VOYAGER OPERATIONS

Course Number: *PVO3*

Wilkes Barre: March 26, 2019

Harrisburg: April 30, 2019

Pittsburgh: October 23, 2019

One Full Training Day - 8:00 a.m. to 5:00 p.m.

This course is designed to familiarize participants with Trane's 3 to 50 ton rooftop units with VAV or CV controls, specifically the 3 to 10 ton Precedent and 12.5 to 50 ton Voyager Rooftop Units. This course focuses on installation, operation and maintenance as well as system troubleshooting, micro controls, ignition and combustion.

Instructor: Nelson Warthan

Audience: Building Owners, Facility Managers, Facility Operators, Contractors

Tuition: \$350.00

PREVENTIVE MAINTENANCE FOR BUILDING SYSTEMS

Course Number: *PM5*

Hunt Valley: February 7, 2019

Pittsburgh: April 4, 2019

Allentown: October 31, 2019

One Full Training Day - 8:00 a.m. to 5:00 p.m.

This course prepares participants to better understand the preventive maintenance needs for mechanical systems such as air handlers, low-pressure boilers, chillers and more. Participants will be prepared to start a preventive maintenance program or better operate an existing program. This course emphasizes the reliability centered maintenance approach of combining strategies to reduce overall cost and keep equipment in top shape.

Instructor: Elmer Franklin

Audience: Building Owners, Facility Managers, Facility Operators, Maintenance Technicians

Tuition: \$350.00



Course Information

REFRIGERATION FUNDAMENTALS & UPDATE

Course Number: *RF3*

Hunt Valley: February 6, 2019

Pittsburgh: April 3, 2019

Allentown: October 30, 2019

One Full Training Day - 8:00 a.m. to 5:00 p.m.

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.

Instructor: Elmer Franklin

Audience: Building Owners, Facility Managers, Facility Operators, Contractors

Tuition: \$350.00



Course Information

TRACE 700 DESIGN ANALYSIS SOFTWARE TRAINING

Course Number: **TR700**

Hunt Valley: October 15 - 17, 2019

Three Full Training Days - 8:00 a.m. to 5:00 p.m.

Students may select one, two or three days of training

Trace 700 Load Design - March 12 - Course Number TR700-1: 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 - March 13 - Course Number TR700-1: 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 - March 14 - Course Number TR700-1: 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.

Instructor: Trane Customer Direct Services (C.D.S.)

Audience: Architects, Consulting Engineers, Design Contractors

Tuition: \$350.00 - One Class
 \$600.00 - Two Classes
 \$950.00 - Three Classes

Note: Hotel and transportation not included.



For more information on any of these training courses, please contact Rebecca McCoy, Marketing Specialist at rebecca.hall@trane.com or 717.561.5415



Course Information

TRACER SYNCHRONY OPERATION

Harrisburg: March 5 - 7, 2019

Two and a Half Training Days - 8:00 a.m. to 5:00 p.m.

In the Tracer Synchrony Operation course, students learn to operate and modify an installed Tracer Synchrony system. This highly interactive course includes presentations and hands-on workshops where students practice using the software applications integral to a Tracer Synchrony building management system.

Instructor: Trane University

Audience: Tracer Synchrony System Owners, Operators, and Building Engineers

Tuition: \$1,320.00

TRACER ENSEMBLE OPERATION

Pittsburgh: May 7 - 9, 2019

Two and a Half Training Days - 8:00 a.m. to 5:00 p.m.

A course specifically designed for building operators and administrators to become more efficient with their Tracer Ensemble building automation system. Trane professional trainers will help you become familiar with these Tracer Ensemble software tasks:

- User management
- Status and overrides
- Working with schedules
- Alarm processing
- Data logging
- Custom reporting

Instructor: Trane University

Audience: Tracer Ensemble System Owners, Operators, and Building Engineers

Tuition: \$1,320.00

Course Information

2019 AIR CONDITIONING CLINICS

Course Number: **ACC5**

Harrisburg: Monday Evenings beginning September 9, 2019

Hunt Valley: Tuesday & Thursday Evenings beginning September 10, 2019

Pittsburgh: Tuesday Evenings beginning September 10, 2019

Wilkes Barre: Tuesday Evenings beginning September 10, 2019

12 Educational Sessions - 5:00 p.m. to 7:30 p.m.

The multi-session Air Conditioning Clinics are intended to educate students on the fundamentals of Heating, Ventilation & Air Conditioning (HVAC). More experienced individuals may consider this a refresher course. This is not a maintenance or repair class.

The Air Conditioning Clinics cover:

Refrigeration Cycle and Refrigeration Compressors

Refrigeration System Components

Introduction to HVAC Systems

Cooling and Heat Load Estimation

Psychrometrics & Air Conditioning Fans

Variable Air Volume (VAV) Systems

Water Source Heat Pumps

VRF Systems

Chillers: Helical-Rotary, Centrifugal and Absorption

Chilled Water Systems

Ice Storage Systems

HVAC System Automatic Controls

** Sessions will be presented in the order listed above.*

Audience: New designers, consulting engineers, architects, building operators and contractors- all trying to better understand their systems or a good refresher course for veterans.

Tuition: \$600.00 per person for all sessions - OR - \$ 95.00 per person for individual sessions

**** For companies sending three or more attendees, we will offer a reduced rate of \$550.00 per person for all sessions.***



Registration Form

Attendee Name: _____ Email: _____

Contact Name (if different from above): _____

Contact Email (if different from above): _____

Company: _____

Company Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Food Allergy/Restriction?: _____

Please register me for the following course(s):

Course #	Location (A/H/HV/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 with Rebecca McCoy
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 McCoy
 3909 TecPort Drive - Harrisburg, PA 17111