

Tampa Bay Trane



Southwest Florida Trane



Making Buildings Better

Educational Courses
for HVAC Professionals

*Owners
Engineers
Servicers
Contractors*

September 2018 - March 2019

2018/2019 TRANE EDUCATIONAL SEMINARS INFORMATION

Tampa Bay Trane and Southwest Florida Trane are once again proud to offer a variety of educational courses for 2018-2019. We continue to offer the most comprehensive local training programs in the HVAC industry and utilize the latest technology available.

If you are interested in certain courses, please fax, e-mail or mail a copy of the registration form included in this program. Electronic registration is also available on our website, www.tampabaytrane.com. Please follow the sign up link under the Training button in the header section of the website. After completing the registration process, a separate reminder announcement will be e-mailed the week prior to each course; therefore please make sure you include your complete information.

If your work schedule prevents you from attending evening classes, ask us about the option of organizing a special class just for personnel from your company at a time that works for your group.

Each course is subject to date and time changes or cancellation if the class size is less than 10 pre-registered students, three (3) days prior to class date.

The course fee schedule has been based on costs associated with each presentation.

A Certificate of Attendance will be awarded to each student at the conclusion of each course.

Note: Snacks and drinks will be provided.

CLASS SPECIALS AND INFORMATION

Tampa Bay Trane will be offering a multi-student discount; for every Three Students sent to a training course you get the Fourth Student FREE for that course. We will also be offering three different packages, each including three courses of relative equipment and course material.

See page 13 for package details.

The courses have been time lined to improve the quality of the education process. Each course grows off the previous, therefore we recommend the classes to be taken in sequence.

Tampa Bay Trane will provide Professional Development Hours (PDH) for approved courses by the Florida Board of Engineers.

CANCELLATION/NO-SHOW POLICY

Please provide written communication of cancellation 7 days in advance. In case of emergency please provide justification as soon as possible to avoid charges; each instance will be reviewed individually. If notice of cancellation is received within 7 days of class, or registrant fails to attend, a charge of 50% of the course fee will be applied. This fee is based on the original full amount of the course.

2018/2019 TRANE EDUCATIONAL SEMINARS SCHEDULE

September 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3 LABOR DAY	4	5	6	7	8
9	10	11 AC CLINIC FUND. #1 TPA & FTM	12	13 AC CLINIC FUND. #2 TPA & FTM	14	15
16	17	18 AC CLINIC FUND. #3 TPA & FTM	19	20 AC CLINIC FUND. #4 TPA & FTM	21	22
23	24	25 AC CLINIC FUND. #5 TPA & FTM	26	27 AC CLINIC FUND. #6 TPA & FTM	28	29
30						

October 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 AC CLINIC FUND. #7 TPA & FTM	3	4 AC CLINIC FUND. #8 TPA & FTM	5	6
7	8	9	10	11	12	13
14	15	16 AC CLINIC ADV. #1 TPA & FTM	17	18 AC CLINIC ADV. #2 TPA & FTM	19	20
21	22	23 AC CLINIC ADV. #3 TPA & FTM	24	25 AC CLINIC ADV. #4 TPA & FTM	26	27
28	29	30 AC CLINIC ADV. #5 TPA & FTM	31 HALLOWEEN			

November 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 AC CLINIC ADV. #6 TPA & FTM	2	3
4	5	6 AC CLINIC ADV. #7 TPA & FTM	7	8 AC CLINIC ADV. #8 TPA & FTM	9	10
11 VETERANS DAY	12	13	14	15	16	17
18	19	20	21	22 THANKSGIVING	23	24
25	26	27 TROUBLESHOOTING ELECTRICAL SYSTEMS	28	29 ELECTRONICALLY COMMUTATED MOTORS	30	

December 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4 SMALL SPLIT SYSTEMS TPA & FTM	5	6 LARGE SPLIT SYSTEMS TPA & FTM	7	8
9	10	11 VOYAGER AND PRECEDENT UNITS TPA & FTM	12	13 DEDICATED OUTDOOR AIR SYSTEMS	14	15



2018/2019 TRANE EDUCATIONAL SEMINARS SCHEDULE

January 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 NEW YEAR'S DAY	2	3	4	5
6	7	8 INTELLIPAK ROOFTOP UNITS	9	10 VARIABLE FREQUENCY DRIVES	11	12
13	14	15 VARIABLE AIR VOLUME SYSTEMS	16	17 TAMPA BAY TRANE TRACER SC	18	19
20	21 MARTIN LUTHER KING DAY	22 CHILLED / HOT WATER PUMPING #1	23	24 CHILLED / HOT WATER PUMPING #2	25	26
27	28	29	30 TAMPA BAY TRANE TRACER ENSEMBLE	31		

February 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5 CGAM CHILLERS #1	6	7 CGAM CHILLERS #2	8	9
10	11	12 TRANE TRACER SC OPERATION		13	14	15
17	18	19 HELICAL ROTARY-AIR COOLED CHILLERS #1	20	21 HELICAL ROTARY-AIR COOLED CHILLERS #2	22	23
24	25	26 HELICAL ROTARY- WATER COOLED CHILLERS #1	27	28 HELICAL ROTARY- WATER COOLED CHILLERS #2		

March 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5 CENTRAVAC #1	6	7 CENTRAVAC #2	8	9
10	11	12 COMMERCIAL MOTORS + STARTERS	13	14 WATER TREATMENT AND COOLING TOWERS	15	16
17 ST. PATRICKS DAY	18	19 TRANE TRACER SC ADVANCED OPERATION		20	21	22
24	25	26	27	28	29 GOOD FRIDAY	30
31						

COURSES OFFERED IN FORT MYERS:

- 12/4 SMALL SPLIT SYSTEMS
- 12/6 LARGE SPLIT SYSTEMS
- 12/11 VOYAGER AND PRECEDENT UNITS

Southwest Florida Trane - Fort Myers Location

**6461 Topaz Court
Ft. Myers, FL 33966
(239) 275-9577
FAX: (239) 278-5502
see page 15 for map**

2018-2019 TRANE EDUCATIONAL SEMINARS

TAMPA REGISTRATION

Tampa Bay Trane



Name _____ Company: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____ E-Mail: _____

Location (circle one - applies to courses with asterisk ONLY): TAMPA FT. MYERS

Course Registration: Please check the box beside the course(s) you wish to take and complete

the Payment Options portion. Return registration by mail, e-mail, fax or register online

at www.tampabaytrane.com by following the link under the "Training" section in the header on the home page.

PG	2018	COURSE TITLE (LISTED BY DATE)	COST	X
5	Sept. 11- Oct. 4	AC Clinic - HVAC Fundamental Series*	\$500	
		Individual classes (list course #)	\$90/ea	
5	Oct. 16- Nov. 8	AC Clinic - HVAC Advanced Series*	\$400	
		Individual classes (list course #)	\$90/ea	
5	Sept. 11 - Nov. 8	AC Clinic - HVAC Fundamentals and Advanced* <i>Discounted cost if you register for series by Aug. 21</i>	\$900	
12	Nov. 27	Troubleshooting Electrical Systems	\$90	
8	Nov. 29	Electronically Commutated Motors	\$90	
9	Dec. 4	Small Split Systems w/ Reliatel Controls*	\$90	
9	Dec. 6	Large Split Systems - 20 to 120 Tons*	\$90	
13	Dec. 11	Voyager and Precedent Packaged Units*	\$90	
7	Dec. 13	Dedicated Outdoor Air Systems	\$90	
PG	2019	COURSE TITLE (LISTED BY DATE)	COST	X
9	Jan. 8	Intellipak Rooftop Units	\$90	
12	Jan. 10	Variable Frequency Drives	\$90	
12	Jan. 15	Variable Air Volume Systems	\$90	
10	Jan. 17	Tampa Bay Trane Tracer SC Operation	\$90	
6	Jan. 22 & 24	Chilled / Hot Water Pumping Systems - Part 1 & 2	\$160	
10	Jan. 30	Tampa Bay Trane Tracer Ensemble Operation	\$90	
7	Feb. 5 & 7	CGAM Chillers - Part 1 & 2	\$160	
11	Feb. 12 - 14	Tracer SC Operation - Factory Training <i>Registration online only at www.trane.com</i>	\$1,320	
8	Feb. 19 & 21	Helical Rotary Air-Cooled Chillers - Part 1 & 2	\$160	
8	Feb. 26 & 28	Helical Rotary Water-Cooled Chillers - Part 1 & 2	\$160	
6	Mar. 5 & 7	CenTraVac - Part 1 & 2	\$160	
7	Mar. 12	Commercial Motors and Starters	\$90	
13	Mar. 14	Water Treatment & Cooling Tower Fundamentals	\$90	
11	Mar. 19 - 21	Tracer SC Advanced Operation - Factory Training <i>Registration online only at www.trane.com</i> <i>*pre-requisite of Tracer SC Operation required</i>	\$1,320	
COURSE PACKAGE OPTIONS - see page 13 for courses and pricing			COST	
Circle Package(s)	Package 1	Package 2	Package 3	

Payment Options

Total # of Classes: _____

Total amount Due: _____

Method Of Payment

P.O.#: _____

Check Enclosed: \$ _____

Circle: Visa/MC/AmEx

Ex: _____ SEC: _____

Name: _____

Billing Address: _____

Signature _____

Send Copy of Registration to:

E-mail

tampabaytrane@trane.com

Fax

813-877-8257

Attn: Training

Mail

Attn: Training

Tampa Bay Trane

902 N Himes Ave.

Tampa, FL 33609

Phone

813-877-8251



AIR CONDITIONING CLINIC TRANE FUNDAMENTALS HVAC SERIES

This course will provide attendees with the fundamentals of Heating, Ventilation and Air Conditioning (HVAC). This course is suggested for those wishing to gain greater awareness and working knowledge of HVAC concepts and those who are new to the HVAC industry. Our instructors will address HVAC theory and practical applications.

The following material is provided with this course:

Complete set of Air Conditioning Clinic Booklets, Ductulator (duct sizing calculator) and Psychrometric Charts (pad of 25)

Course	Course Description	Tampa	Ft. Myers
1	Cooling & Heating Load Estimation Part 1	9/11/18	9/11/18
2	Psychrometry Part 1	9/13/18	9/13/18
3	Cooling & Heating Load Estimation Part 2	9/18/18	9/18/18
4	Psychrometry Part 2	9/20/18	9/20/18
5	Refrig. Cycle & Compressors, System Components & Piping	9/25/18	9/25/18
6	Air Conditioning Fans, VAV Systems	9/27/18	9/27/18
7	HVAC Acoustics	10/02/18	10/02/18
8	HVAC Economics, Fundamentals & Advanced	10/04/18	10/04/18



TARGET AUDIENCE:	HVAC system design engineers, mechanical contractors, architects, system operators, service technicians & building owners
COST:	\$500 series / \$90 per class (Key Service Discount Not Applicable)
TIME:	6:00 p.m. – 9:00 p.m.
TAMPA LOCATION:	902 N. Himes, Tampa, FL 33609
FT. MYERS LOCATION:	6461 Topaz Court, Ft. Myers, FL 33966

AIR CONDITIONING CLINIC TRANE ADVANCED HVAC EQUIPMENT AND SYSTEMS SERIES

This course is geared towards design professionals who have mastered the basics and are ready for in-depth exposure to advanced topics. This is not an entry-level course. Persons who have responsibility and/or influence over HVAC equipment, systems selection and design will benefit from the material presented. An A.C. Clinic Booklet is provided for each session.

Course	Course Description	Tampa	Ft. Myers
1	Introduction to HVAC Systems	10/16/18	10/16/18
2	Centrifugal & Helical Rotary Chillers	10/18/18	10/18/18
3	Chilled Water Systems	10/23/18	10/23/18
4	Water Source Heat Pump Systems	10/25/18	10/25/18
5	HVAC System Control	10/30/18	10/30/18
6	Dehumidification/DOA Systems	11/01/18	11/01/18
7	Ice Storage Systems	11/06/18	11/06/18
8	Variable Refrigerant Flow Systems	11/08/18	11/08/18



TARGET AUDIENCE:	HVAC system design engineers, mechanical contractors, architects, system operators, servicing techs & building owners
COST:	\$400 series / \$90 per class (Key Service Discount Not Applicable)
TIME:	6:00 p.m. – 9:00 p.m.
TAMPA LOCATION:	902 N. Himes, Tampa, FL 33609
FT. MYERS LOCATION:	6461 Topaz Court, Ft. Myers, FL 33966

FUNDAMENTALS AND ADVANCED SERIES DISCOUNT COST:

\$800 - (\$100 Discount if you register for entire series by August 21, 2018)

CENTRAVAC OPERATOR - PART 1 & 2

Two (2) sessions, Part 1 and Part 2 covering:

PART 1 -

Provides a comprehensive overview, including general discussion of centrifugal water chillers and includes the following topics:

Introduction to Chilled Water Systems and Centrifugal Water Chillers.

- Components - compressor, motor, condenser, evaporator, purge and controls. Refrigeration cycle covering system operation.
- Compressor Capacity Control – inlet vanes, impeller dynamics, compressor unloading, surge and adjustable frequency drives.
- Maintenance Considerations – general maintenance requirements of a centrifugal water chiller including importance of maintaining related pumps and cooling towers.
- Mechanical Considerations – reviewing operating logs and trends, observing oil pressure drop, monitoring evaporator and condenser approach temps, observing and recording the oil level, monitoring purge pump-out operation.
- Application Considerations – condensing temperature control, cooling tower bypass, constant or variable flow, heat recovery and ARI Standards.

PART 2 -

A continuation of the Trane CenTraVac Operator – Part 1 course covering the area of troubleshooting including:

- Understanding of chiller logs and the identification of problems
- Preventative maintenance
- Inspections required to monitor and maintain system efficiency and safety
- Water treatment
- Refrigerant
- How to troubleshoot:
- Air in the machine
- Low condenser water flow
- Fouled evaporator tubes
- Condenser water bypassing condenser tubes
- Bypassing chilled water tubes
- Low chilled water flow
- Fouled condenser tubes

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

March 5, 2019

March 7, 2019

*Bringing a laptop computer and USB is recommended.

CHILLED/HOT WATER PUMPING SYSTEMS PART 1 & 2

Two (2) sessions, Part 1 and Part 2 covering:

The objective of this 2 day course is to give the student insight into the basics of Pumping Systems used in Air Conditioning and Heating applications. This course will cover a review of all Pumping System Components. We will discuss the various types of pumps and their application and also cover the need, application and selection of accessories such as Air Separators, Pot Feeders, Balancing Valves, Check Valves, and Expansion Tanks.

Once the student has a solid understanding of the basics we will then cover specific HVAC pumping applications such as:

- Primary Chilled Water
- Secondary Chilled Water
- Primary/Secondary Systems
- Variable Speed or Constant Speed Pumping
- Heating Water Systems
- Condenser Water Systems

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

January 22, 2019

January 24, 2019

CGAM CHILLERS - PART 1 & 2

Two (2) sessions, Part 1 and Part 2 covering:

Presentation of the components, operation, and application of a scroll chiller in Trane products. This course will have a strong focus on troubleshooting and real life situations discussions.

*Bringing a laptop computer and USB is recommended.

Topics include:

Scroll compressor, air-cooled condenser, expansion device, braze plate evaporator, starter, controls, the refrigeration cycle, refrigerants, compressor capacity control, maintenance consideration, and a brief list of application considerations; condensing temperature control and short water loops. Introduction to the DynaView operator interface.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

February 5, 2019

February 7, 2019

COMMERCIAL MOTORS AND STARTERS

This course will focus on three phase motors found in commercial HVAC products. Three phase motor theory and the configuration of various motors will be covered. Motor construction, application, as well as proper maintenance and service will be covered. We will discuss advanced motor troubleshooting and failure analysis.

We will discuss motor starters, including Y-Delta, Part-Winding, Across-The-Line, VFD, Solid State, Auto Transformer, and Primary Reactor, along with where each type is best employed.

Special emphasis will be placed on the motor itself and the fundamentals of three phase induction motors as they are the most common and yet most often misunderstood in our industry.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

March 12, 2019

DEDICATED OUTDOOR AIR SYSTEMS

Dedicated Outdoor Air Systems are designed specifically to condition up to 100% of outdoor air year-round, reduce latent loads, enhance the entire building system's comfort and energy efficiency, and maintaining the health of the building and its occupants.

This course will cover the following topics:

Trane Horizon, Munters, and Morganizers, start up procedures, sequence of operation and system configuration, troubleshooting and maintenance requirements, control sequences, Reliadel controls, refrigerant circuits, evaporator fan, condenser fan motor, heat recovery, hot gas reheat, heat wheels, extra-deep chilled water cooling coils, demand control ventilation, and wireless CO2 controls.

You will learn how to maintain a positive pressure within a building and minimize the cost of treating outdoor air that is required to support healthy work environments and ensure optimal occupant productivity.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

December 13, 2018

ELECTRONICALLY COMMUTATED MOTORS

This course will cover the basics of single phase motors in residential applications, but will focus on ECM (variable speed) motors as they are applied in today's residential and light commercial equipment. Attendees will learn basic motor and start component service and troubleshooting. They will also learn how to identify the many different kinds of motors and select the right one for the job.

ECM is very different from the garden variety single phase motor, but if you approach them the right way, you can be very successful in troubleshooting and repairing them, saving you time and money!

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

November 29, 2018

HELICAL ROTARY AIR-COOLED CHILLERS - PART 1 & 2

Two (2) sessions, Part 1 and Part 2 covering:

This is a presentation of the components, operation, and application of a Helical-Rotary (Screw) compressor in Trane products. The course will have a strong focus on troubleshooting and discussions that are rooted in actual experience.

*Bringing a laptop computer and USB is recommended.

Topics include:

Helical-Rotary compressors, oil separators, air-cooled condensers, metering devices, liquid/vapor separators, evaporators, starters, controls including CH530 and TD 7 with UC controller, the refrigeration cycle, refrigerants, compressor capacity control, slide valve operation, maintenance considerations, and a brief list of application considerations for air-cooled condensers, and condensing temperature control.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

February 19, 2019

February 21, 2019

HELICAL ROTARY WATER-COOLED CHILLERS - PART 1 & 2

Two (2) sessions, Part 1 and Part 2 covering:

This is a presentation of the components, operation, and application of a Helical-Rotary (Screw) compressor in Trane products. The course will have a strong focus on troubleshooting and discussions that are rooted in actual experience.

*Bringing a laptop computer and USB is recommended.

Topics include:

Helical-Rotary compressors, oil separators, water-cooled condensers, metering devices, liquid/vapor separators, evaporators, starters, oil tank and oil eye sensor, oil diagnostics, controls including CH530, the refrigeration cycle, refrigerants, compressor capacity control, slide valve operation, maintenance considerations, and a brief list of application considerations for water-cooled condensers, condensing temperature control, and short water loops.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

February 26, 2019

February 28, 2019

*Discount on this class if purchased with Air-Cooled Chillers Course

INTELLIPAK ROOFTOP UNITS

Intellipak rooftop units are Trane's most complex unitary product. These units are built in sizes from 20-130 tons and often employ accessories such as factory mounted variable frequency drives, Traq dampers to manage the amount of fresh air entering the unit, exhaust fans, and Statitrac for managing building pressurization.

This class will cover startup procedures, operation, troubleshooting and maintenance of this widely utilized product.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

January 8, 2019

LARGE SPLIT SYSTEMS - 20 TO 120 TONS

This class will cover the installation and start up of Trane RAUJ 20-135 ton Condensing Units with a) existing air handlers, b) new Trane Modular Climate Changers, and c) Trane Low Pressure Climate Changers. With a solid understanding of the challenges that can occur at start up and with good advance planning and proper equipment ordering, these systems can be installed easily and without costly material and manpower overruns.

Issues covered in this course will include:

- Why Trane 20 ton and larger condensing units are very different from Trane 15 ton and smaller units.
- Correct refrigerant accessories required at the air handler....are solenoid valves needed?
- Should the solenoid valves be 24 volt or 110 volt?
- Control wiring when utilizing 110 Volt or 24 Volt space thermostats (this is big)
- Correct coil split methodology
- Proper ordering of the Trane air handler coil
- Proper refrigerant pipe sizing and installation for the new R-410A refrigerant
- Control wiring for Constant Volume Systems
- R-22 to R-410A Retrofits

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

December 6, 2018

FT. MYERS DATE:

December 6, 2018

SMALL SPLIT SYSTEMS (WITH RELIATEL CONTROLS) - 5 TO 20 TONS

This class is for all contractors and service techs involved with the installation and servicing of these equipment types.

The class will cover the application of these units as they are designed and the proper installation, operation and maintenance procedures including the proper piping practices for the new R410A refrigerant and pipe sizing changes.

The class will also cover thermostat options, drain piping design, wiring and controls of small split systems. This course will review the wiring of the Reliatel Refrigeration Module (RTRM) on condensers. The class covers troubleshooting and refrigerant charging procedures and will touch on new tools needed for servicing R410A units that run at substantially higher pressures than common refrigerants.

There will be time allotted for questions and answers to help give the class the most up to date information available.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

December 4, 2018

FT. MYERS DATE:

December 4, 2018

TAMPA BAY TRANE TRACER SC OPERATION AND CONTROL MAINTENANCE OPTIONS

This course is designed to familiarize the student with only the basics of the Trane Tracer SC controller. Students will learn about the newest Tracer SC controls options and the ongoing “connected” support that will help you run your building more efficiently while reducing energy. This is only a three-hour course, so the content of what will be covered is limited.

This is not a hands on course - for more specific, in-depth content knowledge, see the Trane Tracer SC Operation course hosted in Tampa, February 12-14, 2019.

Course Description and Learning Outcomes

This course will cover the following aspects of this important control device:

- How to access and monitor building mechanical systems.
- Set user preferences and alter building schedules
- Respond to alarm conditions.
- Generate reports, data logs, and commissioning reports
- On site controls maintenance vs remote maintenance
- Energy analysis and utility consumption trending and benchmarking

TARGET AUDIENCE:

Tracer SC System Owner Operators

COST:

\$90.00

TIME:

6:00 p.m. - 9:00 p.m.

TAMPA DATES:

January 17, 2019

TAMPA BAY TRANE TRACER ENSEMBLE OPERATION AND CONTROL MAINTENANCE OPTIONS

This course is specifically designed for building operators and administrators to become more proficient with their Tracer Ensemble software. Local Trane instructors will demonstrate the software’s common tasks and highlight it’s advanced features. Students will learn about the newest Tracer Ensemble controls options and the ongoing “connected” support that will help you run your building more efficiently while reducing energy. This is an operations-level class and students must have an understanding of personal computers and the Windows operating system.

Course Description and Learning Outcomes

This course will cover the following aspects of this important web-enabled software:

- Navigation.
- User profile management.
- Set user preferences.
- Respond and manage alarms.
- View and understand status.
- Generate reports, data logs, and commissioning reports.
- Create & modify schedules, exceptions and overrides.
- How to use global point control.
- On site controls maintenance vs remote maintenance.
- Energy analysis and utility consumption trending and benchmarking.

TARGET AUDIENCE:

Tracer Ensemble System Owner Operators

COST:

\$90.00

TIME:

6:00 p.m. - 9:00 p.m.

TAMPA DATES:

January 30, 2019

TRANE ST. PAUL TRACER COURSES - HOSTED IN TAMPA

Upon successful completion, students receive a certificate of achievement and earn 2.6 CEUs according to criteria set by the International Association for Continuing Education (IACET) (Washington, DC). To successfully complete the courses, the student is required to attend all sessions, complete the workshops and quizzes throughout the courses, and turn in an evaluation. Students receive a 10% discount for registering 60 days in advance. Students are responsible for their own transportation and lodging. Breakfast and lunch will be provided. Students will be charged full tuition unless registration is cancelled at least three weeks prior to the seminar date. Trane University reserves the right to cancel a seminar with a minimum of three weeks notice. Trane University is not responsible for student related costs due to cancellation. DO NOT purchase airline tickets until you receive your registration confirmation. Registration for these courses must be made through Trane St. Paul – see below for details. Enrollment is on a first come, first served basis.

To register for the following two courses, please fill enroll through the Education Center at: www.trane.com/traneuniversity

TRANE TRACER SC OPERATION HOSTED IN TAMPA

This is the same course and the same instructors that teach the Tracer SC Operation Course in St. Paul, Minnesota.

Note this course is taught during the day from 8:00 a.m. to 5:00 p.m. over 2-1/2 weekdays.

This course is “hands-on” and employs laptop computers linked to a SC for each 2-3 students.

Please send checks to:

Trane

Attn: Teresa Dillenburg
4833 White Bear Parkway
St. Paul, MN 55110
651.407.4209

Course Description and Learning Outcomes

In this course you will learn to operate and modify an installed Tracer SC system. This highly interactive course includes presentations and hands-on workshops where students practice using the software applications integral to a Tracer SC building management system. At the end of this course the student will be able to:

- Monitor and control building mechanical systems.
- Respond to alarm conditions.
- Create custom alarms & custom time-of-day schedules
- Generate reports and data logs.
- Learn how time-of-day, area and variable air system applications work together to control your air side systems.
- Respond to hot and cold calls.
- Utilize contract documentation to identify control component locations.

TARGET AUDIENCE:

Tracer SC System Owner Operators

COST:

\$1,320/person

(Service Discount Not Applicable)

10% discount if registration received before December 14, 2018

TAMPA DATES:

February 12-13, 2019

(8:00 a.m. – 5:00 p.m.)

February 14, 2019

(8:00 a.m. – 11:30 a.m.)

TRANE TRACER SC ADVANCED OPERATION HOSTED IN TAMPA

This is the same course and the same instructors that teach the Tracer SC Advanced Operation Course in St. Paul, Minnesota. Note this course is taught during the day from 8:00 a.m. to 5:00 p.m. over 2-1/2 weekdays.

This course is “hands-on” and employs laptop computers linked to a SC for each 2-3 students.

*Tracer SC Operation is a pre-requisite and must be completed prior to registering for this course.

Course Description and Learning Outcomes

The Tracer SC Advanced Operation course builds on the knowledge and skills learned in the Tracer SC Operation course. This course will enable learners to expand their skillset to complete a variety of advanced operations, control strategies and energy saving methods to get the most value out of their Tracer SC building control system. Upon completion of this course the student will be able to:

- Define and apply coordinated control methods using spaces, Area, VAV Air Systems and schedules.
- Create area application and apply different configurations options.
- Create HVAC, analog and binary schedules.
- Set up and modify data logs with advanced configurations.
- Use Tracer TU to backup, restore and upgrade firmware for Trane unit controllers.
- Configure alarming for binary and analog points.
- Create custom alarm categories and notification classes.
- Route alarm categories to users.
- Work with Tracer Graphical Editor (TGE) to modify graphics

TARGET AUDIENCE:

Tracer SC System Owners, Operators, and Building Engineers

COST:

\$1,320/person

(Service Discount Not Applicable)

10% discount if registration received before January 18, 2019

PREREQUISITE:

Tracer SC Operation Course

TAMPA DATES:

March 19 - 20, 2019

(8:00 a.m. – 5:00 p.m.)

March 21, 2019

(8:00 a.m. – Noon)

TROUBLESHOOTING ELECTRICAL SYSTEMS

This course has been designed to directly address the needs of the HVAC technician who has the responsibility of installing, servicing, troubleshooting, and repairing the various electrical circuits and components of today's HVAC systems.

Competencies covered:

- Circuit fundamentals
- Electrical materials
- Magnetism
- Circuit protection
- Automatic Controls components and applications
- Troubleshooting basic controls
- Types of electric motors
- Application of motors, motor controls
- Troubleshooting electric motors

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00 (Service Discount Not Applicable)

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

November 27, 2018

VARIABLE AIR VOLUME SYSTEMS

Fundamentals of the Variable Air Volume (VAV) approach to air conditioning.

Topics include:

Explanation of VAV, components of a VAV system, terminal unit types (cooling only, reheat, parallel and series fan powered, dual duct), terminal unit controllers (electronic, DDC), diffusers, interior vs. perimeter spaces, system control modes, fan modulation, static pressure control, and system applications considerations (system-level ventilation, freeze protection for coils, part-load space humidity control, building pressure control). The VariTraQ and CCP will also be discussed.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

January 15, 2019

VARIABLE FREQUENCY DRIVES

Variable Frequency Drives (VFDs) are found in all parts of today's HVAC systems. Improved reliability and lower first cost are just two of the reasons that this once new technology has found its way into air handling equipment, pumps and cooling towers on most jobs. Trane's ability to factory mount VFDs on its complete line of Modular Climate Changers, Rooftop Air Handlers, Vertical Self Contained Units and Large Rooftop Packaged Units has further increased the popularity of these electronic devices.

This course will cover a review of the product lines, proper installation, required start-up procedures, field service diagnostics and troubleshooting techniques.

This is NOT a "Certification" course.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

January 10, 2019

VOYAGER AND PRECEDENT PACKAGED UNITS - 3-50 TONS (W/RELIATEL CONTROLS)

Trane Voyager and Precedent Rooftop Units are found in numerous applications throughout Florida's West Coast.

This course covers the startup, operation, maintenance and troubleshooting on these popular Trane unitary products, along with a deeper understanding of the Microelectronics operation and troubleshooting.

The Reliatel Refrigeration Module and associated modules are demonstrated and explained. The control logic as well as the sequence of operation of the equipment and module is explained. The unique on board diagnostic feature will be explained to help the technician quickly identify system problems and reduce down time.

This class will include the most up to date documents on the application and troubleshooting on a CD for the tech's tool box.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

December 11, 2018

FORT MYERS DATE:

December 11, 2018

WATER TREATMENT AND COOLING TOWER FUNDAMENTALS

This course will be taught in two sections:

Cooling Towers

The first section of the course will cover Cooling Tower operational fundamentals, tower size selection and component materials - stainless steel or galvanized. Also included are Florida wind rating requirements, water conservation, and control techniques including variable-flow strategies.

Water Treatment

This section will cover water chemistry and make-up water from various sources and changes in chemistry over time. In addition we will focus on cycles of concentration, potential problems from out of control water chemistry including scale, corrosion and biological growth, Legionella and controlling tower drift.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

March 14, 2019

COURSE PACKAGES - TAMPA ONLY

PACKAGE 1: - 3 course for \$210

- ELECTRONICALLY COMMUTATED MOTORS
- SMALL SPLIT SYSTEMS
- LARGE SPLITS SYSTEMS

PACKAGE 2: - 3 course for \$210

- VOYAGER AND PRECEDENT PACKAGED UNITS W/ RELIATEL CONTROLS
- DEDICATED OUTDOOR AIR SYSTEMS
- INTELLIPAK ROOFTOP UNITS

PACKAGE 3: - 3 course (6 days of classes) for \$420

- CGAM CHILLERS - Part 1 & 2
- HELICAL ROTARY AIR-COOLED CHILLERS - Part 1 & 2
- CENTRAVAC - Part 1 & 2

**ADD Water-Cooled Chillers for \$60 (price purchased with package)

EPA LEVEL TESTING PROGRAMS AND STUDY GUIDE

The United States Environmental Protection Agency (EPA) has required that all persons who maintain, service, repair, or dispose of appliances that contain regulated refrigerants, be certified in proper refrigerant handling techniques as of November 14, 1994. There are four types of certifications -- Core, I, II, and Universal. The test contains multiple sections, each containing twenty five (25) multiple-choice questions. A technician MUST achieve a minimum passing score of 72 percent per section in order to receive the certification. For instance a technician seeking Universal certification must achieve a minimum score of 72 percent, or 18 out of 25 correct, on each of the Sections of the test.

The law requires the test to be a closed book exam. The only outside materials allowed are a temperature/pressure chart and a calculator. We offer a written exam or proctor a computer exam.

Contact one of our Supply Stores for EPA Testing and an EPA Study Guide:

COST:

\$79.22 (EPA Paper Exam Only)

\$119.94 (EPA Online Exam and Study Guide)

\$123.32 (EPA Paper Exam and Study Guide)

**EPA Paper Exam also offered in Spanish (\$86.80)*

STORE HOURS OF OPERATION: Mon-Fri 7 a.m. to 5 p.m.

See back cover for store phone numbers and locations

TRAINING CENTER LOCATIONS

TAMPA BAY TRANE

902 North Himes Avenue, Tampa, FL 33609

Phone: 813-877-8251 Fax: 813-877-8257

ATTN: Alexandra Woodlee or Sandy Tulecki

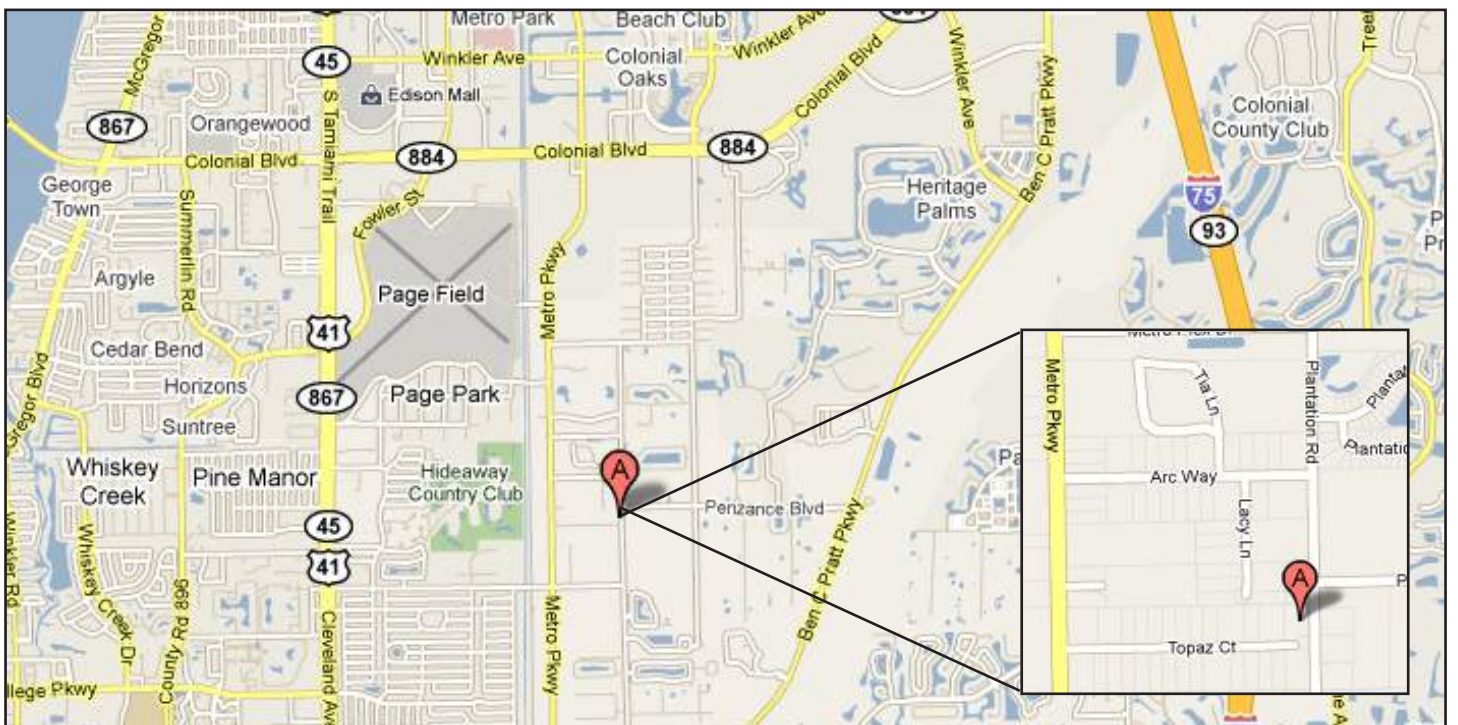


SOUTHWEST FLORIDA TRANE

6461 Topaz Court, Fort Myers, FL 33966

Phone: 239-275-9420 Fax: 239-275-9775

ATTN: Alexandra Woodlee or Sandy Tulecki





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Tampa Bay Trane



902 N. Himes Ave
Tampa, FL 33609
Ph. 813-877-8251
Fax: 813-877-8257

Southwest Florida Trane



6461 Topaz Court
Ft. Myers, FL 33966
Ph. 239-275-9420
Fax: 239-275-9775



HUDSON

16520 Sheer Dr.
Hudson, FL 34667

Ph: 727-245-1320
Fax: 727-245-1321

TAMPA

4720 East Adamo Dr.
Tampa, FL 33605

Ph: 813-877-8253
Fax: 813-876-4778

CLEARWATER

12385 Automobile Blvd.
Clearwater, FL 33764

Ph: 727-572-8255
Fax: 727-573-1604

Toll Free: 866-616-1320

Toll Free: 800-966-8253

Toll Free: 800-966-8257

SARASOTA

2224 72nd Terrace E.
Sarasota, FL 34243

Ph: 941-360-0010
Fax: 941-358-0032

FORT MYERS

6461 Topaz Court
Fort Myers, FL 33966

Ph: 239-275-9577
Fax: 239-278-5502

NAPLES

544 Commercial Blvd.
Naples, FL 34104

Ph: 239-384-5400
Fax: 239-384-5401

Toll Free: 877-529-0010

Toll Free: 888-275-9577

Toll Free: 866-229-1388

2018/2019 Courses Offered

- Air Conditioning Clinic Fundamentals
- Air Conditioning Clinic Advanced
- CentraVac Operator - Part 1 & 2
- Chilled / Hot Water Pumping Systems - Part 1 & 2
- CGAM Chillers - Part 1 & 2
- Commercial Motors and Starters
- Dedicated Outdoor Air Systems
- Electronically Commutated Motors
- Helical Rotary Air-Cooled Chillers - Part 1 & 2
- Helical Rotary Water-Cooled Chillers - Part 1 & 2
- Intellipak Rooftop Units
- Large Split Systems - 20 to 120 Tons
- Small Split Systems (w/Reliabel Controls) - 5 to 20 Tons
- TBT Tracer SC Operation & Control Maintenance Options
- TBT Tracer Ensemble Operation & Control Maintenance Options
- Trane Tracer SC Operation
- Trane Tracer SC Advanced Operation
- Troubleshooting Electrical Systems
- Variable Air Volume Systems
- Variable Frequency Drives
- Voyager and Precedent Packaged Units (w/Reliabel Controls)
- Water Treatment & Cooling Tower Fundamentals