

Making Buildings Better

September 2020
to April 2021

Educational Courses for
HVAC Professionals

- ◆ Owners
- ◆ Engineers
- ◆ Servicers
- ◆ Contractors

Tampa Bay Trane



Southwest Florida Trane



NOW OFFERING: **TRAINING WEBINARS**

Tampa Bay Trane now offers new live and on-demand training webinars available for purchase. It's our mission to provide comprehensive training to customers, via live interactive classes for the modern e-learning/virtual class environment. We are bolstering capabilities and adding new platforms to continue our commitment of providing innovative teaching technologies that empower our customers.

Registration for our live and on-demand training webinars are available on our website: www.tampabaytrane.com. A Certificate of Completion will be sent to each student at the conclusion of each webinar. See Page 14 for more details.

The future of learning took on a new face in the wake of COVID-19. For in-person training, all rooms, tables and chairs are cleaned beforehand. We are limiting the number of customers able to attend to comply and maintain social distancing and masks may need to be worn while roaming the campus.

2020/2021 TRANE EDUCATIONAL SEMINARS INFORMATION

Tampa Bay Trane and Southwest Florida Trane are once again proud to offer a variety of educational courses for 2020-2021. 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 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 added 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.

Note: Training is not available at this time at our Fort Myers Location due to office construction.

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 also offer four different packages, each including three courses of relative equipment and course material. See page 13 for package details. *Offers cannot be combined.

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.

*Note: there are pre-requisites for select courses. See registration form for selected courses.

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. If notice is received after the 7 day prior to start 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. In case of emergency please provide justification as soon as possible to avoid charges; each instance will be reviewed individually.

2020/2021 TRANE EDUCATIONAL SEMINARS SCHEDULE

September 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
13	14	15 AC CLINIC FUND. #1 TPA	16	17 AC CLINIC FUND. #2 TPA	18	19
20	21	22 AC CLINIC FUND. #3 TPA	23	24 AC CLINIC FUND. #4 TPA	25	26
27	28	29 AC CLINIC FUND. #5 TPA	30			

October 2020

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

November 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3 AC CLINIC ADV. #5 TPA	4	5 AC CLINIC ADV. #6 TPA	6	7
8	9	10 AC CLINIC ADV. #7 TPA	11 VETERANS DAY	12 AC CLINIC ADV. #8 TPA	13	14
15	16	17	18	19	20	21

December 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 HVAC FUNDAMENTALS BASIC ELECTRICITY & REFRIGERANT	2	3 ELECTRONICALLY COMMUTATED MOTORS	4	5
6	7	8 SMALL SPLIT SYSTEMS	9	10 LARGE SPLIT SYSTEMS	11	12

January 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 NEW YEAR'S DAY	2
3	4	5	6	7	8	9



2020/2021 TRANE EDUCATIONAL SEMINARS SCHEDULE

January 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
10	11	12 VOYAGER AND PRECEDENT UNITS	13	14 DEDICATED OUTDOOR AIR SYSTEMS	15	16
17	18 MARTIN LUTHER KING DAY	19 INTELLIPAK ROOFTOP UNITS	20	21 VARIABLE FREQUENCY DRIVES	22	23
24	25	26 VARIABLE AIR VOLUME SYSTEMS	27	28 TAMPA BAY TRANE TRACER SC	29	30
31						

February 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 TRANE TRACER SYNCHRONY OPERATION	3	4	5	6
7	8	9 CHILLED / HOT WATER PUMPING #1	10	11 CHILLED / HOT WATER PUMPING #2	12	13
14	15 PRESIDENTS' DAY	16 CGAM CHILLERS #1	17	18 CGAM CHILLERS #2	19	20
21	22	23 HELICAL ROTARY-AIR COOLED CHILLERS #1	24	25 HELICAL ROTARY-AIR COOLED CHILLERS #2	26	27
28						

March 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 TRANE TRACER SYNCHRONY ADVANCED	3	4	5	6
7	8	9 HELICAL ROTARY- WATER COOLED CHILLERS	10	11 WATER TREATMENT FOR COOLING TOWERS	12	13
14	15	16 CENTRAVAC #1	17	18 CENTRAVAC #2	19	20
21	22	23 TAMPA BAY TRANE TRACER ENSEMBLE	24	25 COMMERCIAL MOTORS + STARTERS	26	27
28	29	30	31 VARIABLE REFRIGERANT FLOW SYSTEMS	APRIL 1		

NOTE: NO COURSES OFFERED IN FORT MYERS AT THIS TIME DUE TO OFFICE CONSTRUCTION.

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

2020-2021 TAMPA BAY TRANE EDUCATIONAL SEMINARS REGISTRATION

Name _____ Company: _____

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

Telephone: _____ E-Mail: _____ Date: _____

Return registration by e-mail, fax or register online at www.tampabaytrane.com/training.

Please Note: On-Demand Webinars are not available until the In-Person training session has taken place.

Email tampabaytrane@trane.com for more information*

PG	2020	COURSE TITLE (LISTED BY DATE)	COST	IN-PERSON	Webinar	
					LIVE	ON-DEMAND
5	Sept. 15 - Oct. 8	AC Clinic - HVAC Fundamental Series	\$500			
		Individual Class (list course #)	\$90/ea			
5	Oct. 20 - Nov. 12	AC Clinic - HVAC Advanced Series	\$400			
		Individual Class (list course #)	\$90/ea			
5	Sept. 15 - Nov. 12	AC Clinic - HVAC Fundamental & Advanced <i>Discounted cost if you register by Aug. 27, 2020</i>	\$900			
9	Dec. 1	HVAC Fundamentals - Basic Electricity & Refrigerant	\$90			
8	Dec. 3	Electronically Commutated Motors	\$90			
10	Dec. 8	Small Split Systems - Light Commercial Units	\$90			
9	Dec. 10	Large Split Systems - 20 to 120 tons	\$90			
PG	2021	COURSE TITLE (LISTED BY DATE)	COST	IN-PERSON	LIVE	ON-DEMAND
13	Jan. 12	Voyager & Precedent Packaged Units	\$90			
7	Jan. 14	Dedicated Outdoor Air Systems	\$90			
9	Jan. 19	Intellipak Rooftop Units	\$90			
12	Jan. 21	Variable Frequency Drives	\$90			
12	Jan. 26	Variable Air Volume Systems	\$90			
10	Jan. 28	TBT Tracer SC Operations Summary Course	\$90			
11	Feb. 2 - 4	Trane Tracer Synchrony Operation - Factory Training <i>Registration online only @ www.trane.com</i>	\$1,320			
6	Feb. 9 & 11	Chilled / Hot Water Pumping Systems (Part 1 & 2)	\$160			
7	Feb. 16 & 18	CGAM Chillers (Part 1 & 2)	\$160			
8	Feb. 23 & 25	Helical Rotary Air Cooled Chillers (Part 1 & 2)	\$160			
11	Mar. 2 - 4	Trane Tracer Synchrony Advanced - Factory Training <i>Registration online only @ www.trane.com</i>	\$1,320			
8	Mar. 9	Helical Rotary Water Cooled Chillers	\$90			
13	Mar. 11	Water Treatment for Cooling Towers	\$90			
6	Mar. 16 & 18	CenTraVac Chillers (Part 1 & 2)	\$160			
10	Mar. 23	TBT Tracer Ensemble Operations Summary Course	\$90			
7	Mar. 25	Commercial Motors & Starters	\$90			
12	Mar. 31	Variable Refrigerant Flow Systems	\$90			
COURSE PACKAGE OPTIONS - see page 13 for courses and pricing			COST			
Circle Package(s)	PKG 1	PKG 2	PKG 3	PKG 4		

Payment Options

Total # of Classes: _____

Total Amount Due: _____

Method Of Payment

P.O.#: _____

Check Enclosed: \$ _____

Circle: Visa MC AmEx

#: _____

Exp: _____ SEC: _____

Name on Card: _____

Billing Address: _____

Signature

X _____

Send Copy of Registration to:
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



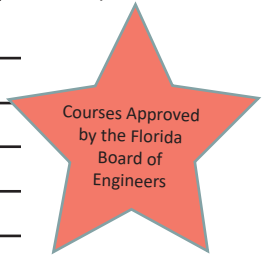
AIR CONDITIONING CLINIC TRANE FUNDAMENTALS HVAC SERIES

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 Title	Tampa	Ft. Myers
1	Cooling & Heating Load Estimation - Part 1	9/15/2020	Not Available
2	Psychrometry - Part 1	9/17/2020	Not Available
3	Cooling & Heating Load Estimation - Part 2	9/22/2020	Not Available
4	Psychrometry - Part 2	9/24/2020	Not Available
5	Refrigeration Cycle, Compressors, System Components and Piping	9/29/2020	Not Available
6	Air Conditioning Fans & VAV Systems	10/1/2020	Not Available
7	HVAC Acoustics	10/6/2020	Not Available
8	HVAC Economics - Fundamentals and Advanced	10/8/2020	Not Available

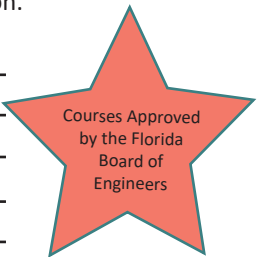


TARGET AUDIENCE:	HVAC system design engineers, mechanical contractors, architects, system operators, service technicians & building owners
COST:	\$500 series / \$90 per class (Service Discount Not Applicable)
TIME:	NOTE: Recommended classes 1-4 to be taken together. 6:00 p.m. – 9:00 p.m.
TAMPA LOCATION:	902 N. Himes, Tampa, FL 33609
FT. MYERS LOCATION:	*Training Not Available - Office is Under Construction*

AIR CONDITIONING CLINIC TRANE ADVANCED HVAC EQUIPMENT AND SYSTEMS

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 Title	Tampa	Ft. Myers
1	HVAC System Control	10/20/2020	Not Available
2	Introduction to HVAC Systems	10/22/2020	Not Available
3	Chilled Water Systems	10/27/2020	Not Available
4	Water Source Heat Pump Systems	10/29/2020	Not Available
5	Centrifugal & Helical Rotary Chillers	11/03/2020	Not Available
6	Dehumidification/DOA Systems	11/05/2020	Not Available
7	Ice Storage Systems	11/10/2020	Not Available
8	Variable Refrigerant Flow Systems	11/12/2020	Not Available



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:	*Training Not Available - Office is Under Construction*

FUNDAMENTALS AND ADVANCED SERIES DISCOUNT COST:

\$800 - (\$100 Discount if you register for entire series by August 27, 2020)

Online Promo Code: 2FORLESS

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 16, 2021

March 18, 2021

*Bringing a laptop computer and USB is recommended.

*Pre-requisite of Chilled / Hot Water Pumps Course Recommended

This is NOT a “Certification” course.

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:

February 9, 2021

February 11, 2021

This is NOT a “Certification” course.

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.

*Tech View Software Download Provided.

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 16, 2021

February 18, 2021

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.

*Pre-requisite of Electronically Commutated Motors Recommended

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:

March 25, 2021

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, Reliatel 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.

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 14, 2021

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!

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:

December 3, 2020

HELICAL ROTARY AIR-COOLED CHILLERS - PART 1 & 2

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

*This course is prerequisite for the Helical Rotary Water-Cooled Chiller class.

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.

This is NOT a "Certification" course.

TARGET AUDIENCE:

Servicers, Building Operators and Contractors

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

February 23, 2021

February 25, 2021

HELICAL ROTARY WATER-COOLED CHILLERS

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.

*The prerequisite course Helical Rotary Air-Cooled Chillers (above) is required for this class.

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.

*Pre-requisite of Rotary Air-Cooled Chillers Course Recommended

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 DATES:

March 9, 2021

HVAC FUNDAMENTALS - BASIC ELECTRICITY & REFRIGERATION

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

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

December 1, 2020

This is NOT a "Certification" 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.

We will also familiarize the student with the service and operation of water cooled condenser self-contained/Intellipak unit, including temperature sensors and the Human Interface control panel.

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

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 19, 2021

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 10, 2020

This is NOT a "Certification" course.

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 light commercial equipment.

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.

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:

December 8, 2020

TAMPA BAY TRANE TRACER SC OPERATION SUMMARY COURSE

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/Synchrony Operation course hosted in Tampa, February 2 - 4, 2020.

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

This is NOT a "Certification" course.

TARGET AUDIENCE:

Tracer SC System Owner Operators

COST:

\$90.00

TIME:

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

TAMPA DATES:

January 28, 2021

TAMPA BAY TRANE TRACER ENSEMBLE OPERATION SUMMARY COURSE

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 its 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.

This is NOT a "Certification" course.

TARGET AUDIENCE:

Tracer Ensemble System Owner Operators

COST:

\$90.00

TIME:

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

TAMPA DATES:

March 23, 2021

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 enroll through the Education Center at: www.trane.com/traneuniversity

TRANE TRACER SYNCHRONY OPERATION HOSTED IN TAMPA

This is the same course and the same instructors that teach the Tracer Synchrony 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.

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 3, 2020

TAMPA DATES:

February 2-3, 2021

(8:00 a.m. – 5:00 p.m.)

February 4, 2021

(8:00 a.m. – 11:30 a.m.)

TRANE TRACER SYNCHRONY 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 1, 2021

PREREQUISITE:

Tracer SC Operation Course

TAMPA DATES:

March 2-3, 2021

(8:00 a.m. – 5:00 p.m.)

March 4, 2021

(8:00 a.m. – Noon)

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.

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 26, 2021

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 21, 2021

VARIABLE REFRIGERANT FLOW SYSTEMS

This course will provide an introduction to Mitsubishi’s Variable Refrigerant Flow Systems, the installation process, and servicing these units.

Topics include but not limited to:

- A brief history of VRF and how VRF Works
- M&P Series vs. City Multi Units (Residential/Commercial Applications)
- 2-Pipe vs. 3-Pipe (Brief labor and cost analysis)
- Installation and service essentials (Best Practices)
- Controls Integration (M-Net, Maintenance Tool, BACnet, Trane and diamond controls)

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:

March 31, 2021

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 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 12, 2021

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.

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:

March 11, 2021

COURSE PACKAGES - TAMPA ONLY

PACKAGE 1: - 3 courses for \$225

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

PACKAGE 2: - 3 courses for \$225

- ELECTRONICALLY COMMUTATED MOTORS
- VARIABLE FREQUENCY DRIVES
- COMMERCIAL MOTORS & STARTERS

PACKAGE 3: - 3 courses for \$225

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

PACKAGE 4: - 4 courses (6 days of classes) for \$450

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

Online Multi-Student Promo Code: 3FOR4

for every three students sent to a training class, the fourth student is FREE for that course

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:

\$70.00 (EPA Paper Exam Only)

\$77.00 (EPA Online Test Only)

\$125.00 (EPA Online Exam and Study Guide)

\$122.00 (EPA Paper Exam and Study Guide)

**EPA Paper Exam also offered in Spanish (\$85.00)*

**EPA Study Guide & Paper Exam offered in Spanish (\$160.00)*

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

See back cover for store phone numbers and locations

NEW: TRAINING WEBINARS

Given the unprecedented changes from COVID-19, we are offering Live and On-Demand webinars of our training held at our Tampa Training Center. Attendees will be able to register for these classes by returning the registration form via email, fax or online on our website: www.tampabaytrane.com The Live & On-Demand webinars are offered at the same price as attending an In-Classroom training, but with the convenience of attending remotely.

Live Webinars:

Attendees will be able to register and remotely attend the training that takes place in our Tampa Training Center. The cost is the same price listed as the In-Person training.

Signing Up:

Attendees will receive a confirmation email with their registration information for the day of training. A reminder email will be sent 1 day and 1 hour before training begins. You will also be able to add the webinar information to your calendar with links provided.

Please be sure your internet connection is secure for Live webinars as we are NOT able to provide solutions to technical difficulties with attendee's remote computers. Be sure to click on the link provided in the email to join the live training webinar. All attendee's will be muted automatically to reduce background noise.

All attendees can utilize the Questions/Chat box feature to ask questions directed to the presenters. Our presenters will NOT be visible to attendees, but the presentation slides and full audio will be available.

NOTE: To receive a certification of completion for engineering credits or for your records, you NEED TO JOIN VIA THE WEBINAR LINK. If you join the webinar solely by dialing in using the phone option, we will NOT have record of you as "Attended" and you will NOT receive a certificate.

On-Demand Webinars:

Since this is our first year offering this, *On-Demand videos will not be available until after the In-Person training session has taken place.* The recorded videos will be available for purchase through our website. Please contact Maria Colón, Marketing and Training Coordinator, for more information: 813-877-8251 ext 1258 or email: maria.colon@trane.com.

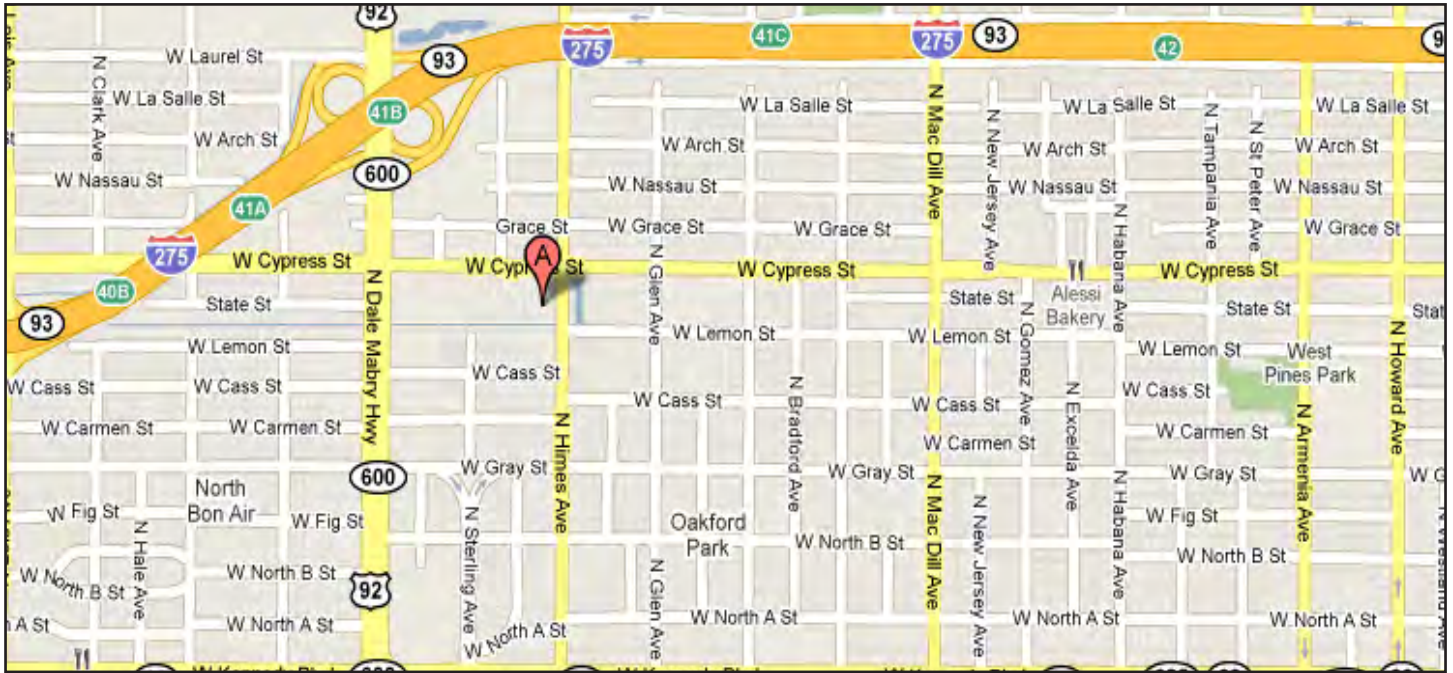
TRAINING CENTER LOCATIONS

TAMPA BAY TRANE

902 North Himes Avenue, Tampa, FL 33609

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

ATTN: Marketing



SOUTHWEST FLORIDA TRANE

6461 Topaz Court, Fort Myers, FL 33966

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

ATTN: Marketing





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Introducing New Trane[®] / Mitsubishi Electric VRF Systems & Tracer SC+ Integration
Superior Energy Efficiency • Maximum Comfort • Outstanding Versatility

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Nv Series



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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 33762
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

2020/2021 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
- HVAC Fundamentals - Basic Electricity & Refrigeration
- Intellipak Rooftop Units
- Large Split Systems - 20 to 120 Tons
- Small Split Systems (w/ReliTel Controls) - 5 to 20 Tons
- TBT Tracer SC Operation & Control Maintenance Options
- TBT Tracer Ensemble Operation & Control Maintenance
- Trane Tracer Synchrony Operation
- Trane Tracer Synchrony Advanced Operation
- Variable Air Volume Systems
- Variable Frequency Drives
- Variable Refrigerant Flow Systems
- Voyager and Precedent Packaged Units (w/ReliTel Controls)
- Water Treatment & Cooling Tower Fundamentals