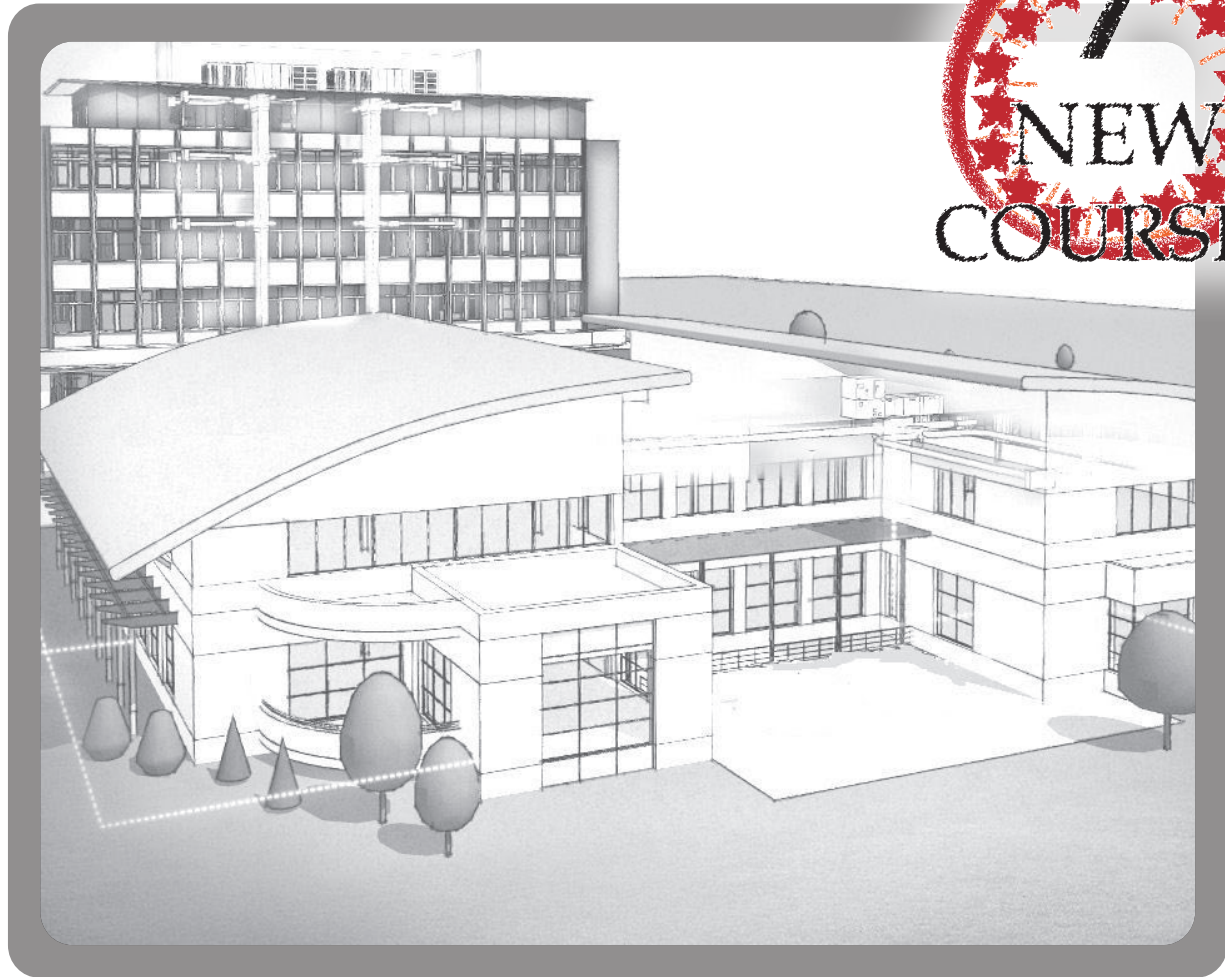


Tampa Bay Trane



Southwest Florida Trane



High Performance Buildings

***Educational Courses for HVAC Professionals
September 2010 - April 2011***

2010/2011 TRANE EDUCATIONAL SEMINARS INFORMATION

Tampa Bay Trane and Southwest Florida Trane are once again proud to offer a variety of educational courses for 2010-2011. 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 drop down menu on the home page 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.

For the added benefit of the student, a review test will be administered and graded at the end of each training seminar. The assessment will be followed by a review of the answers with the instructor .

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, Seven (7) 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.

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.

2010/2011 TRANE EDUCATIONAL SEMINARS SCHEDULE

SEPTEMBER 2010						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
5	6 LABOR DAY	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21 AC CLINIC FUND. #1 TPA & <i>FTM</i>	22	23 AC CLINIC FUND. #2 TPA & <i>FTM</i>	24	25
26	27	28 AC CLINIC FUND. #3 TPA & <i>FTM</i>	29	30 AC CLINIC FUND. #4 TPA & <i>FTM</i>		

OCTOBER 2010						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5 AC CLINIC FUND. #5 TPA & <i>FTM</i>	6	7 AC CLINIC FUND. #6 - TPA & <i>FTM</i>	8	9
10	11	12 AC CLINIC FUND. #7 TPA & <i>FTM</i>	13	14 AC CLINIC FUND. #8 TPA & <i>FTM</i>	15	16
17	18	19	20	21	22	23
24 <i>HALLOWEEN 31</i>	25	26 AC CLINIC ADV. #1 TPA & <i>FTM</i>	27	28 AC CLINIC ADV. #2 TPA & <i>FTM</i>	29	30

NOVEMBER 2010						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2 AC CLINIC ADV. #3 TPA & <i>FTM</i>	3	4 AC CLINIC ADV. #4 TPA & <i>FTM</i>	5	6
7	8	9 AC CLINIC ADV. #5 TPA & <i>FTM</i>	10	11 AC CLINIC ADV. #6 TPA & <i>FTM</i>	12	13
14	15	16 AC CLINIC ADV. #7 TPA & <i>FTM</i>	17	18 AC CLINIC ADV. #8 TPA & <i>FTM</i>	19	20
21	22	23	24	25 THANKSGIVING	26 BLACK FRIDAY	27
28	29	30				

DECEMBER 2010						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
5	6	7 HELICAL #1 TPA	8	9 HELICAL #2 TPA	10	11
12	13	14 BASIC ELECTRICITY TPA	15	16 VAV TPA	17	18
19	20	21	22	23 CHRISTMAS DAY OBSERVED	24 CHRISTMAS EVE	25 CHRISTMAS DAY
26	27	28	29	30	31 NEW YEAR'S EVE	



2010/2011 TRANE EDUCATIONAL SEMINARS SCHEDULE

JANUARY 2011						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 NEW YEAR'S DAY
2	3	4	5	6	7	8
9	10	11 <i>HELICAL #1 FTM</i> COMPRESSORS TPA	12	13 <i>HELICAL #2 FTM</i> INTELLIPAK TPA	14	15
16	17	18 CHILLED/HOT PUMPING SYS #1 TPA	19 <i>BASIC</i> <i>ELECTRICITY FTM</i>	20 CHILLED/HOT PUMPING SYS #2 TPA	21	22
23 30	24 31	25	26	27	28	29

FEBRUARY 2011						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 COOLING TOWERS W.TREAT TPA & <i>FTM</i>	2	3 PACKAGED RTU 2-15 TONS TPA	4	5
6	7	8 CENTRAVAC #1 TPA & <i>FTM</i>	9	10 CENTRAVAC #2 TPA & <i>FTM</i>	11	12
13	14	15 GREEN, LEED & ASHRAE TPA	16	17 <i>INTELLIPAK RTU</i> <i>FTM</i>	18	19
20	21	22 SMALL SPLITS 2-15 TONS TPA	23	24 COMMERCIAL MOTORS TPA	25	26
27	28					

MARCH 2011						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 COMMERCIAL SPLITS 20-120 TPA	2 <i>PACKAGED RTU</i> <i>2-15 TONS FTM</i>	3 COOLING T. & PUMPS TPA	4	5
6	7	8 TRACER ADVANCED TPA	9	10 RESIDENTIAL MOTORS TPA	11	12
13	14	15 TRACER SUMMIT BUILDING OPERATOR - HEADQUARTERS VERSION TPA	16	17 <i>C. MOTORS FTM</i>	18	19
20	21	22	23	24	25	26
27	28	29 BUILDING MOISTURE TPA	30 <i>RESIDENTIAL</i> <i>MOTORS FTM</i>	31		

APRIL 2011						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5 CHILLER PANELS #1 TPA & <i>FTM</i>	6	7 CHILLER PANELS #2 TPA & <i>FTM</i>	8	9
10	11 TRACER MP580/581 INSTALLATION AND PROGRAMMING - HEADQUARTERS VERSION TPA	12	13 <i>SMALL SPLITS FTM</i>	14	15	16
17	18	19 VFD TPA	20	21	22	23
24	25	26	27	28	29	30



2010-2011 TRANE EDUCATIONAL SEMINARS TAMPA REGISTRATION

Tampa Bay Trane



Name _____ Company: _____
 Address: _____ City: _____ State: _____ Zip: _____
 Telephone: _____ Fax: _____ E-Mail: _____

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" drop down menu.

PAGE	2010	COURSE TITLE (LISTED BY DATE)	COST	X
6	Sept 21 - Oct 14	AC Clinic - HVAC Fundamental Series	\$500	
		Individual classes (list course #)	\$90/ea	
6	Oct 26 - Nov 18	AC Clinic - HVAC Advanced Series	\$400	
		Individual classes (list course #)	\$90/ea	
6	Sept 21 - Nov 18	AC Clinic - HVAC Fundamentals and Advanced <i>Discounted cost if you register for series before Sept. 3.</i>	\$800	
10	Dec 7 & 9	Helical Rotary Chillers - Part 1 & Part 2	\$160	
7	Dec 14	Basic Electricity	\$90	
14	Dec 16	Variable Air Volume	\$90	
PAGE	2011	COURSE TITLE (LISTED BY DATE)	COST	X
8	Jan 11	Commercial Applications for HVAC Compressors ★ <i>New</i>	\$90	
10	Jan 13	Intellipak Rooftop Units	\$90	
8	Jan 18 & 20	Chilled/Hot Water Pumping Systems - Part 1 & 2 ★ <i>New</i>	\$160	
9	Feb 1	Cooling Towers & Condenser Water Treatment	\$90	
12	Feb 3	Rooftop Packaged Units - 2-15 Tons ★ <i>New</i>	\$60	
7	Feb 8 & 10	CenTraVac Operator - Part 1 & 2	\$250	
10	Feb 15	Intro. to Green Buildings, LEED & ASHRAE Ratings	\$90	
12	Feb 22	Small Split Systems - 2-15 Tons ★ <i>New</i>	\$60	
9	Feb 24	Commercial Motors ★ <i>New</i>	\$90	
11	Mar 1	Large Commercial Split Systems - 20 to 120 Tons	FREE	
9	Mar 3	Cooling Towers & Pumps Operation & Maintenance	\$90	
12	Mar 8	Tracer Summit Building Operator - Advanced	\$160	
11	Mar 10	Residential Motors ★ <i>New</i>	\$60	
13	Mar 15-18	Tracer Summit Building Operator - HQ Version <i>Registration online only at www.trane.com</i>	\$1,550	
11	Mar 29	Managing Building Moisture	\$90	
8	Apr 5 & 7	Chiller Control Panels - Part 1 & 2	\$160	
14	Apr 19	Variable Frequency Drives	\$90	
13	Apr 11-15	Tracer MP580/581 Inst. & Prog. - HQ Version ★ <i>New</i> <i>Registration online only at www.trane.com</i>	\$1,800	

Payment Options

Total # of Classes: _____
 Total amount Due: _____

Method Of Payment

P.O.#: _____
 Check Enclosed: \$ _____

Visa/MC/AmEx

 Ex: _____ SEC: _____
 Name: _____

Signature

Send Copy of Registration to:

E-mail
tampabaytrane@trane.com

Fax
 813-877-8257 Att: Training

Mail
 Attn: Training
 Tampa Bay Trane
 902 N Himes Ave.
 Tampa, FL 33609



**2010-2011 TRANE EDUCATIONAL SEMINARS
FT MYERS REGISTRATION
Southwest Florida Trane**



Name _____ Company: _____

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

Telephone: _____ Fax: _____ E-Mail: _____

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" drop down menu.

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PAGE	2011	COURSE TITLE (LISTED BY DATE)	COST	X
10	Jan 11 & 13	Helical Rotary Chillers - Part 1 & Part 2	\$160	
7	Jan 19	Basic Electricity	\$90	
9	Feb 1	Cooling Towers & Condenser Water Treatment	\$90	
7	Feb 8 & 10	CenTraVac Operator - Part 1 & 2	\$250	
10	Feb 17	Intellipak Rooftop Units	\$90	
12	Mar 2	Rooftop Packaged Units - 2-15 tons	\$60	
9	Mar 17	Commercial Motors	\$90	
11	Mar 30	Residential Motors	\$60	
8	Apr 5 & 7	Chiller Control Panels - Part 1 & 2	\$160	
12	Apr 13	Small Split Systems - 2-15 Tons	\$60	

Payment Options

Total # of Classes: _____

Total amount Due: _____

Method Of Payment

P.O.#: _____

Check Enclosed: \$ _____

Visa/MC/AmEx

Ex: _____ SEC: _____

Name: _____

Signature

Send Copy of Registration to:

E-mail

tampabaytrane@trane.com

Fax

813-877-8257 Att: Training

Mail

Attn: Training
Tampa Bay Trane
902 N Himes Ave.
Tampa, FL 33609

Ft. Myers classes are held at:
Southwest Florida Trane
6461 Topaz Court, Ft. Myers, FL 33966

Local Contact:
Stacey Perkins
239-275-9420 * sperkins@trane.com



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:

Trane Air Conditioning Manual, 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	9/21/10	9/21/10
2	Psychrometry Part 1	9/23/10	9/23/10
3	Cooling & Heating Load Estimation Part 2	9/28/10	9/28/10
4	Psychrometry Part 2	9/30/10	9/30/10
5	Refrigeration Cycle and Compressors	10/5/10	10/5/10
6	Refrig. System Components, Piping	10/7/10	10/7/10
7	Air Conditioning Fans, VAV Systems	10/12/10	10/12/10
8	HVAC Economics, Fundamentals & Advanced	10/14/10	10/14/10

TARGET AUDIENCE:	HVAC system design engineers, installing contractors, architects, system operators, service technicians & owners
COST:	\$500 series / \$90 per class (Key Service Discount Not Applicable) NOTE: Recommended classes 1-4 to be taken together.
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	10/26/10	10/26/10
2	Centrifugal & Helical Rotary Chillers	10/28/10	10/28/10
3	Chilled Water Systems	11/2/10	11/2/10
4	Water Source Heat Pump Systems	11/4/10	11/4/10
5	HVAC System Control	11/9/10	11/9/10
6	Dehumidification/DOA Systems	11/11/10	11/11/10
7	Ice Storage Systems	11/16/10	11/16/10
8	HVAC Acoustics	11/18/10	11/18/10

TARGET AUDIENCE:	HVAC system design engineers, installing contractors, architects, system operators, servicing techs & 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 September 3, 2010)

BASIC ELECTRICITY

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, Contractors, Servicing Owners, Operators

COST:

\$90.00 (Key Service Discount Not Applicable)

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

December 14, 2010

FT. MYERS DATE:

January 19, 2011

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:

CenTraVac Owners and Operators

COST:

\$250.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

Part 1 - February 8, 2011

Part 2 - February 10, 2011

FT. MYERS DATES:

Part 1 - February 8, 2011

Part 2 - February 10, 2011

CHILLED/HOT WATER PUMPING SYSTEMS

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 Owners

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

January 18, 2011

January 20, 2011

CHILLER CONTROL PANELS

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

This class will cover the control functions, protection and safeties, control output functions, monitoring functions, and chiller diagnostic capabilities. This course will also show you how to interface with the different chiller control panels: UCP II, and the newest control panel, the CH530, into many levels of control:

- The Chiller
- The Chiller Plant
- The Building System
- Central Building Automation System

Each level is critical for reliable operation and optimal performance.

TARGET AUDIENCE:

Building Operators and Owners

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA & FT. MYERS DATES:

April 5, 2011

April 7, 2011

COMMERCIAL APPLICATIONS FOR HVAC COMPRESSORS

Gain a full understanding of reciprocating, scroll, screw and centrifugal compressors and how they are applied. The majority of the course will focus on why these devices fail in air conditioning systems.

Compressor failures result in high maintenance expense, loss of usable space, dissatisfied employees and lost customers. Compressor technology and manufacturing procedures produce a very reliable product that, if operated within a safe environment, will do its job over a long operating life. When a failure occurs, finding the cause of the failure is a first consideration if the replacement compressor is to operate properly and reliably.

The objective of this training is to identify typical causes for compressor failures and discuss the repairs needed to protect the replacement compressor.

This requires discussion of the refrigeration system, the airside system and a means to identify the cause of failure by examining the compressor parts.

TARGET AUDIENCE:

Building Operators and Owners

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

January 11, 2011



COMMERCIAL MOTORS

Three Phase Motors & Starters

This course will focus on three phase motors found in the commercial HVAC products. Three phase motor theory and the configuration of various motors will be reviewed. Across-The-Line, VFD, Soft Start, Primary Reactor, Auto Transformer, and Y-Delta starters will be explained along with where each type is best employed.

Special emphasis will be placed on the operation and troubleshooting of the Y-Delta starter as this is one of the most common and yet most often misunderstood starters in our industry.

TARGET AUDIENCE:

Service, Contractors, Servicing Owners, Operators

COST:

\$90.00 (Key Service Discount Not Available)

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

February 24, 2011

FT. MYERS DATE:

March 17, 2011



COOLING TOWER FUNDAMENTALS AND CONDENSER WATER TREATMENT

The first section of this course will cover Cooling Tower Fundamentals:

Operation, components, features, materials, water conservation, design selection, and control strategies. Particular attention will be paid to the application of Cooling Towers in the Florida marketplace.

The second section of the course will focus on Condenser Water Treatment:

Main topics include the prevention of scaling, corrosion, algae, sediment, and other maintenance issues. Safety concerns will also be addressed, with particular attention on microorganisms such as Legionella Pneumophila, the bacteria that causes Legionnaire's Disease.

TARGET AUDIENCE:

Engineers, Design Build Contractors, Owners/Operating Persons

COST:

\$90.00 (Key Service Discount Not Applicable)

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA & FT. MYERS DATE:

February 1, 2011

COOLING TOWERS AND PUMPS OPERATION AND MAINTENANCE

This class covers the mechanics of pumping: pump selection, alternative pumping systems, pump control schemes and pump alignment and maintenance.

The course will also cover Cooling Tower mechanics, including the selection and operation of Cooling Towers. Water Treatment, which is essential to effective Cooling Tower operations, is also an important part of the curriculum.

Our instructors will review the proper selection and application of lubricants used in pumps and cooling tower equipment and also review the value and application of various methods of non destructive testing such as spectrographic oil analysis and vibration analysis.

TARGET AUDIENCE:

Contractors, Servicers, Field Service Technicians

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

March 3, 2011

HELICAL ROTARY CHILLERS (SCREW COMPRESSORS)

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

Presentation of the components, operation, and application of a helical-rotary (screw) compressor in Trane products. This course will have a strong focus on troubleshooting and real life situations discussions.

Topics include:

Helical-rotary compressor, oil separator, condenser (water-cooled and air-cooled), expansion device, liquid/vapor separator, evaporator, starter, controls, the refrigeration cycle, refrigerants, compressor capacity control, slide valve operation, maintenance consideration, and a brief list of application considerations (air-cooled or water-cooled) condensing, condensing temperature control and short water loops.

Introduction to the DynaView operator interface and the new AdaptaView panel.

TARGET AUDIENCE:

Servicing Owners, Operating Personnel

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATES:

December 7, 2010

December 9, 2010

FT. MYERS DATES:

January 11, 2011

January 13, 2011

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 mount variable frequency drives, Traq dampers to manage the amount of fresh air entering the unit, exhaust fans, 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

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

January 13, 2011

FT. MYERS DATE:

February 17, 2011

INTRODUCTION TO GREEN BUILDINGS, LEED AND ASHRAE RATINGS

The focus on green and sustainable building design and operations has completely transformed the building industry in a short amount of time. Many building professionals are challenged with the requirement to understand green building issues and how they relate to their business. Those seeking to become a LEED Accredited Professional are searching for assistance preparing for the exam. Taught by one of the area's leading experts on green buildings, this course will provide you with an overview of the U.S. Green Building Council, the LEED rating system, up to date ASHRAE ratings and important green building issues. Attendees will also learn the path to becoming a LEED Accredited Professional.

Issues covered in this course include:

- Why Green Buildings?
- Green Building Benefits
- ASHRAE Ratings
- LEED Rating System
- Cost of Green Buildings
- The Future of LEED
- LEED AP Exam Overview

TARGET AUDIENCE

Building owners, managers, architects, engineers, consultants, operators, and anyone interested in green and sustainable building issues.

COST:

\$90.00 (Key Service Discount Not Applicable)

TIME:

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

TAMPA DATE:

February 15, 2011

LARGE COMMERCIAL 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 Volts 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 Variable Air Volume Systems
- Control wiring for Constant Volume Systems
- Power wiring VFD operations on MCC series

TARGET AUDIENCE:

Mechanical Contractors, Design Engineers, Servicers

COST:

FREE

Space is limited, attendance is by registration ONLY

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA

March 1, 2011

MANAGING BUILDING MOISTURE

ASHRAE Standard 62-89 imposes significantly greater amounts of outdoor air on Florida's buildings. The management of the outdoor air can greatly impact the resultant indoor environment.

In addition, the course covers how to detect sources of unwanted moisture that could impact internal humidity levels and methods to prevent outdoor air from entering the building envelope without proper conditioning.

In this case students will be introduced to key HVAC system concepts that are critical to obtaining successful indoor conditions regardless of which air conditioning products are employed.

Proper equipment selection, equipment room layout, temperature controls, and on-going system maintenance will also be covered. A discussion evaluating direct expansion, desiccant, and chilled water IAQ solutions are a key part of the curriculum.

TARGET AUDIENCE:

Consulting Engineers, Design Build Contractors, Architects and Owners

COST:

\$90.00 (Key Service Discount Not Applicable)

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

March 29, 2011

RESIDENTIAL MOTORS

Single Phase Motors plus an Introduction to Three Phase Motors

This course will begin with a review of the basic operation and uses of residential motors and their related starting components. We will survey the various motor types found in residential and light commercial HVAC equipment with an emphasis on proper motor wiring and troubleshooting techniques for each. The course will highlight the application, sizing and servicing of capacitors. Lastly we will cover the basic theory of three phase motors and associated troubleshooting techniques.

TARGET AUDIENCE:

Servicers, Building Owners

COST:

\$60.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

March 10, 2011

FT. MYERS DATE:

March 30, 2011



ROOFTOP PACKAGED UNITS - 2-15 TONS (W/RELIATEL CONTROLS)

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

This course covers the startup, operation, maintenance and troubleshooting on this popular Trane product. Plus for those needing a deeper understanding of the Microelectronics operation and troubleshooting.

The Voyager Micro board is both demonstrated and explained. Changes occurring with the evolution into the new ReliaTel Controls are also 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 Owners

COST:

\$60.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

February 3, 2011

FT. MYERS DATE:

March 2, 2011



SMALL SPLIT SYSTEMS - 2-15 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. 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 Owners

COST:

\$60.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

February 22, 2011

FT. MYERS DATE:

April 13, 2011



TRANE TRACER SUMMIT BUILDING OPERATOR - ADVANCED

This course is designed for technicians who currently operate a Trane Tracer Summit Building Automation System.

This is a refresher course. We will review the techniques learned during the week long Trane course to fill in the gaps, answering real life situation questions and help you with troubleshooting. Previous attendance at the Trane Tracer Summit Operator course is not a requirement, but previous experience is.

We will cover:

- Review recent Trane software releases
- Review time-of-day scheduling
- How to modify existing graphics
- Monitoring and controlling building mechanical systems
- Responding to alarm conditions
- Creating custom alarms and expanded messages
- Generating reports and trends
- Monitoring chiller plant operations

TARGET AUDIENCE:

Tracer Summit Building System Operators (Owners/Operators only, Contractors are NOT allowed to attend)

Attendance will be governed by the same qualifications as the Trane Tracer Summit Building Operators - Headquarters' version

COST:

\$160.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

March 8, 2011

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 (Washington, DC). Students receive a \$200 discounts for registering 60 days in advance. Students are responsible for their own transportation, lodging, and meal expenses. The ICS Institute assists in arranging local lodging/transportation and provides lunch each day. Students will be charged full tuition unless registration is cancelled at least three weeks prior to the seminar date. ICS Institute reserves the right to cancel a seminar with a minimum of three weeks notice. ICS Institute 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 to the following two courses, please fill out the on-line enrollment form at:

www.trane.com/commercial/training

TRANE TRACER SUMMIT BUILDING OPERATOR

This is the same course and the same instructors that teach the Tracer Summit 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 3-1/2 weekdays. This course is “hands-on” and employs laptop computers linked to a BCU for each 2-3 students.

Course Description and Learning Outcomes

In this course you will learn to operate and modify an installed Tracer Summit system. This is a highly interactive course where you will learn and exercise common applications of a Tracer Summit 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 and expanded messages
- Create schedules
- Modify existing graphics
- Generate reports, trends, and calculations
- Monitor Chiller Plant Control
- Learn how Time-of-Day (TOD) Area and Variable Air Systems (VAS) work together

TARGET AUDIENCE:

Tracer Summit System Operators

COST:

\$1,550/person

(Key Service Discount Not Applicable)

\$200 discount if registration received before January 14, 2011

PREREQUISITE:

An operating level understanding of PC's and Windows operating system

TAMPA DATES:

March 15-17, 2011 (8:00 a.m. – 5:00 p.m.)

March 18, 2011 (8:00 a.m. – Noon)

FT. MYERS DATES:

NOT OFFERED

TRANE TRACER MP508/581 INSTALLATION & PROGRAMMING COURSE

The Tracer™ MP580/581 field-installed controller is well suited for a wide variety of building control applications, such as air handlers, cooling towers, pumps, boilers, and heat exchangers. In Tracer® MP580/581 Installation and Programming, students learn to configure the MP580/581 using the Roverservice tool. General topics include point programming, Tracer™ graphical programming (TGP), use of the Tracer MP580/581 as a small building controller, and integration with Tracer Summit™ using built-in profile variables and existing library routines.

Specific Topics Covered:

- Rover Service Tool
- MP 580 Hardware Layout
- Tracer Graphical Programming
- Small Building Networks
- Interfacing Trace Summit with the MP 580



TARGET AUDIENCE:

Servicing Owners

COST:

\$1,800/person

(Key Service Discount Not Applicable)

\$200 discount if registration received before February 11, 2011

PREREQUISITE:

None

TAMPA DATES:

April 11-14, 2011 (8:00 a.m. – 5:00 p.m.)

April 15, 2011 (8:00 a.m. – Noon)

FT. MYERS

NOT OFFERED

VARIABLE AIR VOLUME

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, supply duct design, 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, Varitrane Owners/Operators

COST:

\$90.00

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

December 16, 2010

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 population 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, Contractors, Servicing Owners, Operators

COST:

\$90.00 (Key Service Discount Not Applicable)

TIME:

6:00 p.m. – 9:00 p.m.

TAMPA DATE:

April 19, 2011

SELF STUDY PROGRAMS

The PARTNERS IN EXCELLENCE Self Study Program has been developed to provide a convenient low cost way to learn. Self Study extends the opportunity for everyone to learn. It is probably true that you cannot travel to all of the training sessions that you would like to attend or that could certainly be used. Self Study is definitely not the total answer to your training needs, but in many cases, it may be the only practical way to get instruction. Through the Self Study Program, you are able to get most of the basic concepts out of the way, freeing up more time for other specialized training.

The PARTNERS IN EXCELLENCE Self Study Program can effectively augment your own on-the-job training programs. Companies may find it difficult to quickly develop internal training efforts to meet changing company needs. By using the Self Study Program, any number of students can be trained at any time and under complete supervision. Questions are answered and records kept, just as in a regular classroom.

The Self Study Program provides specialized course materials prepared in a sequential and logical order to students without interfering with their job or home life and without regular class meetings.

The Self Study Program also includes a series of individual curriculums which provide in-depth, focused training on selected topics. Each curriculum is made up of one unit which is divided into chapters. Review questions are given at the end of each chapter. Answers to the review questions are listed in the back of the manual. This provides the student with immediate feedback on how well he/she understands the materials.

A unit examination is included with each mailing. The unit examination must be completed and returned to the Aftermarket Training Department for correction and grading. Unless specifically directed to do so, the student should complete unit examinations without referring to the text material. Help is always available for inquiries regarding context or questions and answers.

A grade of 80% is required to pass the unit examination. A certificate of completion is awarded to you when the entire curriculum requirements have been completed.

Study Guide

The study guide contains a brief introduction to each unit of study. Each chapter is prefaced with a statement of purpose and objectives: what you should know after studying the chapter.

Chapter Review Quiz

Following each chapter is a self-check progress review quiz for you to complete. This quiz is designed to give you immediate feedback on how well you have learned the assigned reading. After completing the quiz, check your answers with those provided in the back of your unit manual. The page number where the material can be found in the text is given for each question.

Unit Examinations

A unit examination is included in a separate envelope with each unit mailed. The unit examination must be completed and returned to PARTNERS IN EXCELLENCE for grading and evaluation. Unless specifically directed to do so, you should complete these examinations without referring to your text material. For your convenience, pre-addressed envelopes in which to mail completed examinations are included with all course materials. Corrected exams are returned with the correct answers and a page reference of where the answers can be found in the text. Additional comments may be included when appropriate. A score of 80% is required to pass the curriculum. If you do not receive a passing mark, you will be given the opportunity to retest.

“Ask Your Instructor” Forms

If you have any questions or problems with the course materials, please use the “Ask Your Instructor” forms (1-19.42) to communicate with the Aftermarket Training Department at headquarters. We will be prompt with a complete reply. Academic Records: A permanent record will be maintained in secured, confidential files at the PARTNERS IN EXCELLENCE training department. A copy of your records will be available to you via a written request. Your request must include your name, complete address and social security number.

Certificate of Completion

A certificate is awarded for each curriculum successfully completed.

SELF STUDY COURSES

BASIC ELECTRICITY

Order Number:
ABU-TRG-KIT-11
CEU's Awarded: 2.0
Cost: \$120.00

This curriculum is written for the person just beginning to study electricity. No previous formal training in the subject matter is required. It is written to be a basic building block for future studies.
Applicable Contact HRS: 20

Unit 1

Chapter 1	Electrical Current and Distribution
Chapter 2	Electrical Controls
Chapter 3	Reading Wiring Diagrams

BASIC REFRIGERATION

Order Number:
ABU-TRG-KIT-2
CEU's Awarded: 3.1
Cost: \$235.00

The objective of this curriculum is to give the student an insight into Basic Refrigeration. The curriculum has been designed to provide a basic overview for both the technical and non-technical individual who wishes to expand his or her knowledge of the refrigeration cycle. The material includes the basic principles of heat and heat transfer, an explanation of refrigerants and their use in the air conditioning cycle, basic principles of the refrigeration cycle and the components required to create the cycle.
Applicable Contact Hours: 31

Unit 1

Chapter 1	Heat and Heat Transfer
Chapter 2	Refrigerants
Chapter 3	The Refrigeration Cycle
Chapter 4	System Types

Unit 2

Chapter 5	Condensers
Chapter 6	Evaporators
Chapter 7	Compressors

Unit 3

Chapter 8	Expansion/Metering Devices
Chapter 9	Reversing Valves
Chapter 10	Filter Driers
Chapter 11	Receivers/Accumulators

INDOOR AIR QUALITY - HEALTH EFFECTS

Order Number:
ABU-TRG-KIT-17
CEU's Awarded: 1.2
Cost: \$90.00

The high visibility of Indoor Air Quality problems has created opportunities for knowledgeable HVAC professionals in a broad range of services. This curriculum is designed to provide the student with an overview of indoor air quality issues.
Applicable Contact Hours: 12

Unit 1
Chapter 1 Introduction to Indoor Air Quality
Chapter 2 IAQ Pollutants and Their Health Effects

INDOOR AIR QUALITY - BUILDING DYNAMICS

Order Number:
ABU-TRG-KIT-18
CEU's Awarded: 1.4
Cost: \$90.00

This course is based on a "building systems" approach in which the building is examined together with its contents and occupants. The HVAC system and contamination sources are also reviewed.
Applicable Contact Hours: 14

Unit 1
Chapter 1 Indoor Air Quality and Building Operations
Chapter 2 Indoor Air Quality and HVAC Systems
Chapter 3 Moisture Dynamics

INDOOR AIR QUALITY - PREVENTION

Order Number:
ABU-TRG-KIT-19
CEU's Awarded: 1.4
Cost: \$90.00

With the increased knowledge regarding the effects of Indoor Air Quality comes the increased knowledge of prevention. This curriculum dedicates its contents to the understanding of prevention.
Applicable Contact Hours: 14

Unit 1
Chapter 1 Preventing Indoor Air Quality Problems
Chapter 2 Investigating IAQ Problems
Chapter 3 Mitigating IAQ Problems

RECIPROCATING COMPRESSORS

Order Number:
ABU-TRG-KIT-22
CEU's Awarded: 3.1
Cost: \$150.00

This curriculum has been designed to provide a basic overview for both the technical and non-technical individual who wishes to expand their knowledge of the reciprocating compressor in its operation, failure and remanufacturing.
Applicable Contact Hours: 31

Unit 1
Chapter 1 Compressor Operation
Chapter 2 Compressor Failures
Chapter 3 Remanufacturing Compressors

ELECTRIC MOTORS

Order Number:
ABU-TRG-KIT-16
CEU's Awarded: 1.6
Cost: \$120.00

The objective of this curriculum is to give the student an insight into Electric Motors. The course has been designed to provide a basic overview for technical and non-technical individuals who wish to expand their knowledge of electric motors. The material includes how electric motors work, types of electric motors, and how to identify electric motors.
Applicable Contact Hours: 16

Unit 1
Chapter 1 How Electric Motors Work
Chapter 2 Types of Electric Motors
Chapter 3 Identifying Electric Motors

2010-2011 TRANE EDUCATIONAL SEMINARS
 SELF STUDY REGISTRATION

Tampa Bay Trane



Name _____ Company: _____
 Address: _____ City: _____ State: _____ Zip: _____
 Telephone: _____ Fax: _____ E-Mail: _____
 Social Security # _____ (required for CEUs)

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" drop down menu.

PLEASE ENROLL ME IN THE FOLLOWING CURRICULUM			
Course Title	Order #	Price	Check Here
Basic Electricity	ABU-TRG-KIT-11	\$120.00	
Basic Refrigeration	ABU-TRG-KIT-2	\$235.00	
Indoor Air Quality - (Health Effects)	ABU-TRG-KIT-17	\$90	
Indoor Air Quality - (Building Dynamics)	ABU-TRG-KIT-18	\$90	
Indoor Air Quality - (Prevention)	ABU-TRG-KIT-19	\$90	
Reciprocating Compressors	ABU-TRG-KIT-22	\$150	
Electric Motors	ABU-TRG-KIT-16	\$120	

Method Of Payment

P.O.#: _____

Check Enclosed: \$ _____

Visa/MC/AmEx

Ex: _____ SEC: _____

Name: _____

Signature

Send Copy of Registration to:

E-mail: tampabaytrane@trane.com

Fax: 813-877-8257 Att: Training

Mail

Attn: Training
 Tampa Bay Trane
 902 N Himes Ave.
 Tampa, FL 33609

Tampa Bay Trane



902 N Himes Avenue
Tampa, FL 33609

Standard Presort
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We are in your Neighborhood

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

3911 W. Cypress St.
Tampa, FL 33607

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

CLEARWATER

11577 U.S. Hwy. 19 N.
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

2010/2011 Courses Offered

Air Conditioning Clinic Fundamentals
Air Conditioning Clinic Advanced
Basic Electricity
CenTraVac Operator - Part 1 & 2
Chilled/Hot Water Pumping Systems - Part 1 & 2
Chiller Control Panels - Part 1 & 2
Commercial Applications for HVAC Compressors
Commercial Motors
Cooling Towers & Condenser Water Treatment
Cooling Towers & Pumps Operation & Maintenance
Helical Rotary Chillers - Part 1 & 2
Intellipak Rooftop Units
Intro to Green Buildings, LEED & ASHRAE Ratings
Large Commercial Split Systems - 20 to 120 tons
Managing Building Moisture
Residential Motors
Rooftop Packaged Units - 2-15 tons
Small Split Systems - 2-15 tons
Trane Tracer MP580/581 Installation and Programming
Tracer Summit Building Operator - Advanced
Tracer Summit Building Operator - Headquarters
Variable Air Volume
Variable Frequency Drives