

2018 HVAC Technical Service Training US Air Conditioning Distributors Course Offerings

Air Conditioning Training Specialists, Inc.

PO Box 20190

Mesa, Arizona 85277-0190



#GS-02F-0070S



US Air Conditioning Distributors & Air Conditioning Training Specialists, Inc. are pleased to provide advanced technical training courses for HVAC dealers, contractors, and end user customers. Listed are descriptions of our course offerings.



2018 Contractor HVAC Technical Service Courses

EPA Refrigerant Certification Training & Testing Program (Section 608) (1 Day) - \$290.00

Course Description - This course is designed to review the technical subject areas necessary to prepare HVACR technicians to take and pass an EPA approved refrigerant transition and recovery certification program administered by Ferris State University. The objective of the course is to have attendees achieve a universal certification rating pursuant to the U.S. Clean Air Act (Section 608) Title VI, 40 CFR Part 82, Subpart F.



Topics to include –

- EPA Exam Expectations
- General HVACR Systems
- Basic Refrigeration
- Refrigerant Chemistry
- Refrigerant Oils
- Ozone Depletion
- Global Warming
- Montreal Protocol
- United States Legislation & Regulations
- Recovery Recycling & Reclaiming Refrigerants
- Safe Handling & Transportation of Refrigerants
- Conservation – Servicing & Testing of Systems
- Waste Oils
- High & Low Pressure Chillers
- Exam Rules Regulations and Structure



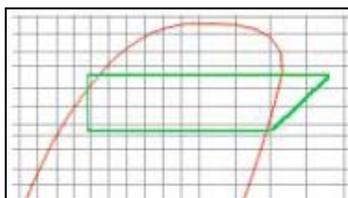
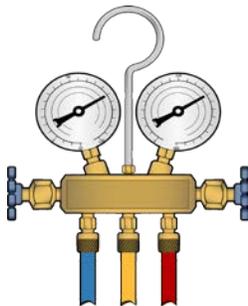
Refrigeration - Technical Service & Troubleshooting Course (4.75 Days) - \$1,195.00

Course Description: This course is designed to teach the principles of the mechanical refrigeration process. Students will gain an understanding of the basic skills necessary to properly service, troubleshoot and maintain modern HVAC systems. Studies of adult education have identified that the majority of adults learn by doing and our state of the art lab does just that. Technical lecture material taught in the classroom is re-enforced in our supervised lab where students will work on actual equipment and put to practice what was just learned in the classroom. Attendees will be taught practical service procedures and troubleshooting techniques that will enhance their performance back on the job. This course was developed for equipment operators, maintenance personnel and service technicians who maintain, troubleshoot, and service residential and commercial HVAC.



Topics to include:

- Identification of essential system component parts and accessories
- Review of ARI system classifications
- Thermodynamic mechanical refrigeration cycle analysis
- Pressure enthalpy diagrams and practical applications
- Direct and indirect cooling systems
- System troubleshooting to include – identifying refrigerant over/under charge, low air flow evaporator/condenser, restricted liquid line, and system non-condensables
- Superheat and sub cooling determination for common refrigerant types
- Proper system evacuation and dehydration techniques
- Machine room guidelines and refrigeration safety concerns
- Basics of heat transfer methods and measurement
- Identifying refrigeration system irregularities and proper use of refrigerant data logs
- Refrigerant charging procedures
- EPA concerns and guidelines per section 608 US Clean Air Act
- Single component and blended refrigerant mixture service considerations
- HVAC service practices and procedures
- System performance factors and design considerations
- Common compressor types, operation, service and troubleshooting
- Compressor and system capacity control methods
- Air and water cooled condenser types, operation, service and troubleshooting
- Common evaporator types, operation, service and troubleshooting
- Various metering devices, operation, service and troubleshooting
- Effective system clean up after mild and severe burnouts



Electrical - Technical Service & Troubleshooting Course (4.75 Days) - \$1,195.00

Course Description – The majority of field problems in the HVAC industry are the result of electrical system malfunctions. Properly identifying and correcting these malfunctions in a timely manner represents the greatest challenge to the skills of service technicians. This course was specifically designed to address these concerns and give attendees the “technical tools” and confidence necessary to fix the problem right the first time and reduce costly callbacks. The course takes a logical and practical approach in teaching wiring diagram interpretation and the application of time proven troubleshooting procedures and techniques. Studies of adult education have identified that the majority of adults learn by doing and our state of the art lab does just that. Technical lecture material taught in the classroom is re-enforced in our supervised troubleshooting lab where students will work on actual equipment and put to practice what was learned in the classroom by troubleshooting actual systems with electrical faults. Attendees are taught practical service procedures and troubleshooting techniques that will enhance their performance back on the job. This course was developed for maintenance personnel and service technicians who maintain, troubleshoot, and service residential and light commercial HVAC equipment.



Topics to include –

- Reading and interpretation of various electrical schematics for residential and light commercial heating and cooling systems - determining the sequence of operation
- Applying factual ladder schematics and component location diagrams to various systems
- Use and application of common electrical meters in electrical troubleshooting
- Developing a logical approach to troubleshooting and timely correction of system malfunctions – prevention of repeat failures
- Troubleshooting common electromechanical safety and operating controls
- Troubleshooting various printed circuit boards and solid state controls – identifying function of boards and testing inputs/outputs
- Develop safe electrical troubleshooting practices and procedures – hopscotch method of troubleshooting
- Troubleshooting single phase motor starting gear – hard and soft start kits
- Single and three phase motor theory and construction
- Troubleshooting common single and three phase motors
- Three phase voltage and current imbalance determination
- Motor testing and replacement guidelines
- Determining root cause and failure analysis



All prices are valid until December 31, 2018

United States Government Orders via GSA Schedule –



#GS- 02F-0070S

Please note that Air Conditioning Training Specialists, Inc. is an active and registered company with the United States Department of Defense under the Central Contractor



Registration (CCR) as listed with the Defense Logistics Agency. The CAGE Code number for Air Conditioning Training Specialists, Inc. is 1JMV9 and the DUNS number is 045259616. All ORCA representations and certifications are current and up to date. The Federal Identification number for Air Conditioning

Training Specialists, Inc is 20-3185963. James P. Curley is the instructor for these courses is a certificated proctor for the Ferris State University Refrigerant Transition and Recovery Program (FSU Registration: F000948). Mr. Curley is also an approved electrical continuing education instructor for the State of Washington and Oregon Department of Labor & Industries Electrical Program and has over 50 years of HVACR industry experience.



Custom On-Site Training Courses – Worth Considering

The best way to obtain the maximum value for your training budget is to schedule us to conduct the courses at your place of business. By arranging custom on-site training at your work place you can:

- Reduce travel related expenses for your employees
- Reallocate travel funds to training dollars
- Train and motivate a greater number of employees
- Maintain normal schedule of employees
- Audit the training program to ensure compliance to your training needs and objectives
- Retain the employees on-site in case of emergencies

What a great way to invest in your staff while at the same time stretching your training dollars. Training is an Investment in your most valuable commodity – your employees. Training reduces callbacks and makes your business more profitable. If you are interested in discussing this option further please give us a call at (480) 830-1634.



James P. Curley is the President of Air Conditioning Training Specialists, Inc. (ACTS), a company that provides specialized training and services to the HVACR Industry. Prior to starting this company, Jim was a Master Instructor and Instructional Designer with over 35 years experience for the Commercial Systems and Services Division of Carrier Corporation, a United

Technologies Company. Jim's career at Carrier involved assignments based from Syracuse NY, Los Angeles CA, and Phoenix AZ. Jim grew up in the air conditioning business, as his father was a successful contractor in central New York specializing in commercial refrigeration and air conditioning. Jim majored in heating, ventilation, air conditioning, and refrigeration at Hudson Valley Community College and upon completion was hired by Carrier Corporation's headquarters in Syracuse, NY. His first assignment was a technician for the engineering test laboratories from 1969 to 1974. It was in these laboratories that concepts on a piece of paper for equipment design became a reality. Prototype machines were developed and built in a model shop and then tested to meet rigorous manufacturing and industry standards to ensure compliance. This assignment gave Jim the insight to component and system design to add to his practical and theoretical knowledge of air conditioning. From 1974 until his retirement from Carrier in January 2005, Jim was responsible for instructional course development, computer based training programs, scheduling, marketing and implementation of the factory training operations throughout the United States for the North American Operations of Carrier, Bryant, Day & Night and Payne divisions of Carrier Corporation. Jim was also Carrier's Director of Customer Assurance for the Western United States for the Commercial Unitary Division. This position gave him responsibilities for service engineering and warranty administration on a variety of commercial products. He has designed and managed custom on-site training programs for diverse applications of cooling systems ranging from applications for nuclear power plants, coalmines, oilrigs, submarines, inter-continental ballistic missiles, the federal penitentiary system, water treatment and pumping plants, minesweeping ships and various industrial complexes. He has developed specialized training programs for technician development in air conditioning service, psychrometrics, heat pumps, gas heating, refrigerant management, and chilled water systems. He has conducted several hundred classes and trained several thousand people around the world. Jim has taught on four continents spanning 24 countries. Jim is dedicated to and has extensive training obligations for United States military bases located throughout the world for the US Air Force, US Army and the US Coast Guard. He has written and published training books for Carrier Corporation on product specific equipment, solar energy, air measurement, psychrometrics, and advanced heat pump systems. Jim is the author of a technical publication titled "Air Flow Measurement" for the Refrigeration Service Engineers Society's SAMS manual. Jim has developed technical training programs for colleges, trade schools, unions, government agencies, end user customers, trade associations, utilities and air conditioning distributors throughout the United States and is committed to training excellence.

On a personal note, Jim is the father of five daughters and the proud grandfather of 13 grandchildren & 9 great grandchildren. Jim and his wife Joyce reside in Mesa, Arizona.

Air Conditioning Training Specialists, Inc.

Air Conditioning Training Specialists, Inc. (ACTS) is a provider of quality technical training solutions for the HVACR industry. We designed our skills related training programs based on an underlying philosophy that "adults learn by doing." ACTS reinforces this approach to learning through a delicate balance of classroom lecture applied with "hands on" troubleshooting labs. *The goal of ACTS is to offer cost effective HVAC training that exceeds the expectations of the learner.*

Air Conditioning Training Specialists, Inc. 2018

ENROLL NOW! – REGISTRATIONS ARE ACCEPTED ON A FIRST-COME, FIRST-SERVED BASIS AND SEATS ARE LIMITED.

CONSULT YOUR TAX ADVISOR REGARDING INCOME TAX DEDUCTION POSSIBILITIES FOR EDUCATIONAL EXPENSES TO IMPROVE & MAINTAIN YOUR PROFESSIONAL SKILLS

UNITED STATES TREASURY REGULATION §1.162-5



HVAC Technical Service Training Please Print Clearly and Fill in Completely Registration Form

Student Information	Name		Phone ()	
	PO Box/Street			
	City	State	Zip Code	
	Fax ()	Email		
Company Information	Name		Phone ()	
	PO Box/Street			
	City	State	Zip Code	
	Fax ()	Point of Contact		

PLEASE CHECK DESIRED COURSE, DATE AND LOCATION		Location	Date	Tuition
1. <input type="checkbox"/>	Refrigeration – Technical Service & Troubleshooting Course	Industry, CA	02/12/18 – 02/16/18	\$1,195.00
2. <input type="checkbox"/>	EPA Refrigerant Certification Training & Testing (Section 608)	Industry, CA	02/17/18	\$290.00
3. <input type="checkbox"/>	Electrical – Technical Service & Troubleshooting Course	Industry, CA	02/19/18 – 02/23/18	\$1,195.00
4. <input type="checkbox"/>	Refrigeration – Technical Service & Troubleshooting Course	San Diego, CA	11/26/18 – 11/30/18	\$1,195.00
5. <input type="checkbox"/>	EPA Refrigerant Certification Training & Testing (Section 608)	San Diego, CA	12/01/18	\$290.00
6. <input type="checkbox"/>	Electrical – Technical Service & Troubleshooting Course	San Diego, CA	12/03/18 – 12/07/18	\$1,195.00

Please Specify Payment Method PAYMENT FORM

Credit Card	<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/>  #GS-02F-0070S	<input type="checkbox"/> 
Name on Credit Card				
Card Number				
Credit Card Billing Information	Street Address or PO Box			
	City	State	Zip Code	
Expiration Date	()/() mm/yy	Credit Card Security Code Number ()		
<input type="checkbox"/> Purchase Order - copy of PO MUST accompany registration PO Number:				
<input type="checkbox"/> Checks - make payable to Air Conditioning Training Specialists, Inc. – payment due 10 days prior to start of class – must accompany registration				
<input type="checkbox"/> US Government Orders Please Apply GSA Schedule #GS-02F-0070S James P. Curley of Air Conditioning Training Specialists, Inc. is proud to be a GSA Schedule partner with the Federal Supply Service and registered with the United States Department of Defense under Central Contractor Registration (CCR) 1JMV9.				

Questions & Registrations
 Fax or mail this registration and payment form to:

James P. Curley
 Telephone: (480) 830-1634
 Cell: (602) 361-4689

Air Conditioning Training Specialists, Inc.
 PO Box 20190
 Mesa, Arizona 85277-0190

Phone: (480) 830-1634
 Cell: (602) 361-4689
 Fax: (480) 654-3604
 Email: jamespcurleyhvac@aol.com

We look forward to seeing you in class!



GENERAL INFORMATION

USAirconditioning

DISTRIBUTORS

The world's largest privately owned HVAC distributor

POC: Marie Rohde

16900 Chestnut Street
Industry, CA 91748

Telephone: (626) 854-6833

Fax: (626) 854-6840

Email: m.rohde@us-ac.com

POC: Greg Kooyman

8717 Complex Drive
San Diego, CA 92123

Telephone: (858) 522-7234

Fax: (858) 522-7280

Email: g.kooyman@us-ac.com



GENERAL INFORMATION

Instructors	Courses are taught by experienced and industry recognized HVAC professionals.
Lodging	Rooms and meals are available at hotels, motels, and restaurants and are within driving distance to course locations. Tuition fee covers cost of the course and related materials. It does not include meals, housing, or transportation. These arrangements are the responsibility of the student.
Hours	Courses begin promptly and run from 7:30 am – 5:00 pm .
What To Wear	Comfortable work clothes and work shoes. Class rooms are air conditioned and at times may be too cool for some so dress accordingly.
Acceptance	We will confirm your registration with a confirmation letter and provide detailed information on local lodging and reporting instructions to class: IMPORTANT: Please Do Not make travel reservations until you receive confirmation from us that the class is confirmed. All tuition fees are in US dollars. We reserve the right to change class dates or cancel classes as deemed necessary at which point you may elect to be rescheduled or receive a full tuition refund.
Student Cancellation Policy	Cancellations received 16 or more working days prior to the class start date will be refunded in full , 11 – 15 working days prior to the class start date will be charged 50% of the class fee. Cancellations made 10 or less working days prior to the class start date no refund will be issued and the full class fee will be charged, you will receive a 1 year tuition credit to attend any class of equal value. There will be no tuition credit issued for NO SHOWS . Students that do not complete the course will be charged the full tuition.