Arizona Heat Pump Council

FALL 2017

- Master Heat Pump Technician Program
- HVAC System Consultant Series
- Commercial Technician Series

Continuing Education Program

edu.elaz.org
Phone: 602.263.0115
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Who We Are

The Arizona Heat Pump Council (HPC) is part of the Electric League of Arizona (ELA) founded in 1960. HPC members are an active group of professionals who are committed to benefitting Arizonans through the use of energy efficient heating, ventilation, air conditioning, and refrigeration (HVACR) products and services. Visit www.ELAZ.org for more information.

Educational Opportunities

Since 1985, Arizona Heat Pump Council has offered a full array of continuing education opportunities for HVACR professionals. Thousands of individuals have chosen HPC courses to enhance their knowledge and skills in the industry.

- All HPC courses qualify for North American Technician Excellence (NATE) Continuing Education Units.
- Many HPC courses qualify for Building Performance Institute (BPI) Continuing Education Units.

Certificate Programs

Master Heat Pump Technician

The Master Heat Pump Technician (MHPT) Program is designed specifically for the technician who is seeking to gain the skills and certification to take them to the next level in their career. Technicians completing this seven-course program with a "B" or better become Master Heat Pump Technicians and earn a patch to proudly display on their uniforms as well as a certificate of completion. All seven courses are offered each semester. We strongly recommend courses be taken in the order they are outlined. A one-time certificate fee is required – **see Course Registration Form to register**.

HVAC System Consultant

The HVAC System Consultant (HSC) Program is specifically designed for the individual in the position of consulting and designing the right system for their customers. The series is designed to give the consultant the knowledge and skills required to properly assess the customer's needs and to help the customer find the best system to meet those needs. Consultants completing the seven-course program receive a certificate of completion. A one-time certificate fee is required – **see Course Registration Form to register**.

Heat Pump Council Membership Benefits

In the Arizona Heat Pump Council referral program, members enjoy all the benefits the ELA has to offer plus some unique opportunities to grow their business and participate in cooperative marketing initiatives with Arizona utilities. This referral program provides consumers with a fast and efficient response to their needs and supplies Council members with quality sales and service referrals. **For more information on membership, contact 602-263-9391 or visit www.elaz.org**.

Heat Pump Council Education Requirements

For existing members to maintain an active status in Heat Pump Council Referral Program, the following requirements apply:
Each company must accrue a minimum of eight continuing education credits (2 classes) during each semester (Spring & Fall).
Contractors may select various employees to attend courses based on their specific needs. More than one person may attend the same class to receive credit as long as a passing grade of "C" or better is earned. By emailing, mailing or faxing your registration, you are committing to attend the designated classes and therefore are eligible to participate in the referral program.

Business & Non-Technical Courses

HPC 126 Refrigeration Fundamentals

Date: August 9, 2017
Time: 6:00pm - 9:30pm
Instructor: Robert MacPherson
Fees: $144 Non-Members/$114 Members/$57 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3.5 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: This class covers all the fundamentals of refrigeration and is highly recommended to take prior to the popular Refrigeration Theory & System Diagnosis.
Who Should Attend: This is a great class for beginning technicians and non-technical staff but is also highly recommended for anyone wanting to brush up on their refrigeration knowledge.

HPC 152 Delivering Professional Service (To be offered Spring 2018)

Master Heat Pump Technician Program

HPC 101 Refrigeration Theory & Systems Diagnosis

Session 1: August 14 & 16, 2017
Session 2: October 10 & 12, 2017
Time: 6:00pm - 9:30pm
Instructor: Rich Porter
Fees: $150 Non-Members/$120 Members/$60 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/7 NATE Continuing Education Hours
Session 1 Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004
Session 2 Location: SRP Pera Club, 1 E. Continental Drive, Tempe, AZ 85281

Note: Included with this class is a Super Cool Slide Rule.
What You Can Expect: This course will review mechanical refrigeration theory and system troubleshooting. The four basic components, reversing valves, superheat, sub-cooling, sensible heat, latent heat and BTU's are all reviewed. This course will focus on heat pump operation and diagnosis. If you do not have service experience and/or refrigeration training, **Refrigeration Fundamentals** is a recommended prerequisite.
Who Should Attend: This class is designed for those wanting to master the heat pump refrigerant system. Technicians of all levels will benefit from this course. This course is also part of the Master Heat Pump Technician program.

HPC 102 Charging, Piping, and Dehydration

Dates: August 22, 24 & 29, 2017
Time: 6:00pm - 9:30pm
Instructor: Joel Harris
Fees: $170 Non-Members/$140 Members/$70 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/10 NATE Continuing Education Hours
Location: SRP Pera Club, 1 E. Continental Drive, Tempe, AZ 85281

What You Can Expect: Did you know factory studies of failed compressors show that a large amount of compressor failures are caused by improper refrigerant levels? This is not a well-known fact in our industry. Refrigerant charge imbalances cause slow degradation of the compressor bearings, valves and motor windings. This results in compressor failures occurring some time after the charge becomes unbalanced, making the connection between refrigerant levels and malfunctions difficult. Improper piping and contaminants are also big offenders.

Who Should Attend: Technicians of all experience levels will benefit from this course. This course is also part of the Master Heat Pump Technician program.

HPC 103 Electrical Fundamentals for Heat Pumps

Dates: September 5 & 7, 2017
Time: 6:00pm - 9:30pm
Instructor: Carl Bartoli
Fees: $144 Non-Members/$114 Members/$57 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/7 NATE Continuing Education Hours
Location: SRP Pera Club, 1 E. Continental Drive, Tempe, AZ 85281

What You Can Expect: This class will focus on basic electricity as it pertains to heat pump operations. Topics to be covered include basic electron theory, electromagnetism and PSC motor theory. You will understand how compressors run and start systems work. Having an understanding of capacitor and potential relay operation on an electron level can help the service technician diagnose and avoid malfunctions that are commonly overlooked.

Who Should Attend: Technicians of all experience levels will benefit from this course. This course is also part of the Master Heat Pump Technician program.

HPC 104 Control Systems for Heat Pumps

Dates: September 12 & 14, 2017
Time: 6:00pm - 9:30pm
Instructor: Carl Bartoli
Fees: $144 Non-Members/$114 Members/$57 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/7 NATE Continuing Education Hours
Location: SRP Pera Club, 1 E. Continental Drive, Tempe, AZ 85281

What You Can Expect: Participants will attain the knowledge to design an entire electrical system for a residential heat pump. You will also learn the theory of operations and diagnostics of heat pump control circuitry including calibration and testing of common brands of thermostats, cooling and heating anticipation circuits, and commonly used electromechanical and electronic defrost systems.

Who Should Attend: HVAC technicians who want a better working knowledge of heat pump controls. This course is also part of the Master Heat Pump Technician program.

HPC 105 Customer Service & Selling Skills

Date: September 6, 2017
Time: 6:00pm - 9:30pm
Instructor: Rich Porter
Fees: $144 Non-Members/$114 Members/$57 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3.5 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: What is the importance of quality service? How do you provide it? This real-world customer service program will help you develop the techniques to provide top quality service. Win with customers when they are angry or complaining. Listen and learn about what your customer needs. Do you know when to service and when to sell? There comes a time when it is no longer in your customer's best interest to repair the HVACR equipment any longer. Learn how to make your customer's lives better, educate the customer and arouse their interest; provide additional information and benefits, and offer maintenance agreements and/or new equipment.

Who Should Attend: This course is geared specifically to the HVAC service technician. This course is also part of the Master Heat Pump Technician program.

HPC 106 HVAC Code & Safety

Dates: September 18 & 20, 2017
Time: 6:00pm - 9:30pm
Instructor: Travis Howard
Fees: $204 Non-Members/$174 Members/$87 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/7 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

Note: Included in this class is a copy of the current **2015 International Mechanical Code**.

What to Expect: This class is designed to make you more comfortable with the International Mechanical Code. In this interactive class, popular code issues and interpretations will be discussed. Come prepared to discuss your personal experiences with the Code.

Who Should Attend: Principals, supervisors and technicians who want a practical insight on code and safety in the mechanical trade. This course is also part of the Master Heat Pump Technician program.

HPC 107 Airflow Dynamics

Session 1: September 25 & 27, 2017
Session 2: November 27 & 29, 2017
Time: 6:00pm - 9:30pm
Instructor: Rich Porter
Fees: $144 Non-Members/$114 Members/$57 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3.5 BPI Continuing Education Credits
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

Note: Included in this class is a **Duct Calculator**.

What You Can Expect: Airflow is one of the most critical issues for customer comfort. Many comfort complaints and improper system operation problems are a result of poor air distribution. A thorough understanding of airflow dynamics can enable you to uncover and resolve system problems. This course will help you identify inadequate or excessive airflow issues. It will help you solve hot spot, drafty, noisy and stale air complaints. Frequently airflow problems can be easily solved by a minor adjustment or changing to a better register.

Who Should Attend: Anyone involved in estimating and home sales. Service technicians and installers will definitely benefit from this class. This course is also part of the Master Heat Pump Technician program.

HVAC System Consultant Series

- **HPC 105 Customer Service and Selling Skills** (See page 3 for specific class information.)

- **HPC 106 HVAC Code & Safety** (See above for specific class information.)

- **HPC 108 Wake Up To Heat Pumps**

Date: November 20, 2017
Time: 6:00pm - 8:00pm
Instructor: Rich Porter
Fees: $134 Non-Members/$104 Members/$52 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/2 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

Note: **Recommended course for new members.**
What to Expect: Wake Up To Heat Pumps is a class designed to educate the student on all the benefits of Heat Pump operation. The hows and whys will be covered in depth, as well as the economical value that these systems provide. Natural Laws, Efficiency, Heat Transfer, and definitions are also covered in this class as well as why this climate is perfect for Heat Pumps.
Who Should Attend: This class is for anyone who wants a better understanding of this viable alternative to the standard electric or gas furnace.

- **HPC 111 Proper Installation Procedures**

Dates: October 2 & 4, 2017
Time: 6:00pm - 9:30pm
Instructor: Rich Porter
Fees: $189 Non-Members/$158 Members/$79 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/7 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

Note: Included in this class is a copy of the reviewed **Technicians Guide for Quality Installation**.
What You Can Expect: This course focuses on all the skills required for proper installations of split and package heat pumps. You will learn the tricks of the trade and how to avoid common installation mistakes made in the field. Other topics include: proper trap and condensate design, brazing techniques, refrigerant line design and setup, flex duct installation and application, control wiring fundamentals, thermostat installation and more. Send your installer to this class to make your installation department more profitable as well as reduce post installation service problems.
Who Should Attend: This class is designed primarily for installers and those service technicians that want to gain knowledge of what proper installations should look like.

- **HPC 115 Manual J**

Dates: October 16, 17 & 18, 2017
Time: 6:00pm - 9:00pm
Instructor: Bo Rogers
Fees: $219 Non-Members/$184 Members/$92 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/9 NATE Continuing Education Hours
Location: SRP Pera Club, 1 E. Continental Drive, Tempe, AZ 85281

Note: Included in this class is a copy of **ACCA's Manual J 8AE**.
What You Can Expect: Learn about the basic principles of heat transfer, R-values and heat transfer multipliers. A step-by-step example of single-zone, single-family, or detached calculation for a whole house will be reviewed. Sample calculations for multi-zone, variable air-volume systems, multi-zone split-coil systems, and mobile home load. Review the methods used to estimate annual energy consumption and operating costs. An optional procedure for making leakage and infiltration CFM calculations on a component-by-component basis will also be reviewed.
Who Should Attend: Anyone involved in estimating or in-home sales including service technicians, supervisors, managers and owners looking to expand business and increase technical skills.

- **HPC 116 Duct Design/Manual D**

Dates: October 23 & 25, 2017
Time: 6:00pm - 9:30pm
Instructor: TBD
Fees: $219 Non-Members/$184 Members/$92 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3.5 BPI Continuing Education Credits
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

Note: Included in this class is a copy of the reviewed **Residential Duct Systems/Manual D**.
What You Can Expect: Duct system types, application and selection (examples of duct sizing calculation, constant volume system, flexible duct, junction box systems, multiple zones, and two story systems). How duct leakage affects air quality and the combined performance of the envelope equipment systems. (duct losses and noise control).
Who Should Attend: This class is designed for the Master Heat Pump Technician, advanced technician, system designers and other HVAC professionals.

HPC 137 Consulting for Better Sales

Date: November 9, 2017
Time: 6:00pm - 9:00pm
Instructor: Bo Rogers
Fees: $144 Non-Members/$114 Members
Credits: 4 Continuing Education Credits/3 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: This class is designed to give added value to your customer. Its emphasis is on the importance of taking the opportunity to make additions or adjustments to your customer's system to improve comfort. This course will also discuss common system problems that affect comfort and operating cost. Sales techniques and technical training covered in the HVAC System Consultant Series will be briefly recapped as well as offering additional suggestions on how to improve your presentation style and effectiveness.

Who Should Attend: Sales Managers, technicians or anyone who has the responsibility of customer in-home sales and customer satisfaction.

Advanced Technician Courses

HPC 139 Duct Diagnostics and Repair

Date: November 8, 2017
Time: 5:30pm - 9:30pm
Instructor: Bo Rogers
Fees: $189 Non-Members/$164 Members/$82 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/2 BPI Continuing Education Credits
Location: SRP Pera Club, 1 E. Continental Drive, Tempe, AZ 85281

Note: Included in this class is a copy of **ACCA's Technician's Guide for Duct Diagnostics and Repair.**

What You Can Expect: This class will help you understand major duct issues concerning efficiency, comfort, health, and safety. Get practical tips on installation, repair, testing and diagnosing duct systems.

Who Should Attend: This class is designed for the Master Heat Pump Technician, advanced technician, system designers and other HVAC professionals.

HPC 149 HVAC Troubleshooting

Date: November 14, 2017
Time: 6:00pm - 9:30pm
Instructor: Travis Howard
Fees: $134 Non-Members/$104 Members/$52 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3.5 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: This course will discuss proper steps and procedures for effective troubleshooting. We will discuss trouble-shooting tool usage, calibration and care. We will review troubleshooting charts for electrical and mechanical heating and cooling.

Who Should Attend: New service technicians and all installation technicians.

HPC 155 Gas Furnace Safety & Operation

Date: November 21, 2017
Time: 6:00pm - 9:30pm
Instructor: Robert MacPherson
Fees: $168 Non-Members/$138 Members/$69 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3.5 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

Note: Included in this class is a copy of the reviewed **Medium and High Efficiency Gas Furnaces**.

What You Can Expect: This class focuses on proper operation and safety for residential gas heating systems. Practices for servicing and testing to ensure safe operation will be reviewed, and will cover combustion, furnace construction, furnace controls, ignition systems, sequence of operation and basic service procedures.

Who Should Attend: Service technicians and installation technicians.

HPC 158 Wi-Fi Controls

Dates: November 13, 2017
Time: 6:00pm - 9:00pm
Instructor: Rich Porter
Fees: $134 Non-Members/$104 Members/$52 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: This class will help take the "WHY" out of Wi-Fi. We will cover the principles of Wi-Fi, wireless, and communicating controls. Special attention will be given on wiring and connecting to the internet. Also covered is the technology needed to operate these "Smart Thermostats". Customers want to be able to monitor and adjust their controls from everywhere as well as being notified if there is any problem. Wi-Fi enabled thermostats do this and so much more.... Give your customers what they are asking for.

Who Should Attend: This class is for anyone who does not feel comfortable with this new technology.

HPC 159 Zone Systems

Dates: November 15, 2017
Time: 6:00pm - 9:00pm
Instructor: Rich Porter
Fees: $134 Non-Members/$104 Members/$52 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: This informative class focuses on the installation, set-up, wiring, and troubleshooting of Zone Systems. Participants will gain full working knowledge of these systems. Regardless of brand, the technician will be empowered properly diagnose, by-pass (to provide temporary comfort), and repair these often confusing systems.

Who Should Attend: This class is designed for anyone who wants the understanding to build confidence and professionalism.

HPC 160 Wrightsoft – Using Right-J for Sizing Calculation

Date: November 3, 2017
Time: 8:30 am – 4:30 pm
Instructor: Wrightsoft
Fees: $269 Non-Members/$219 Members
Credits: 4 Continuing Education Credits
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

Note: This class is eligible for CEU/H's for National Certificate Programs.

What You Can Expect: An overview of Right-Suite Universal, Templates & Project Wizard, practical application, and Zoning & equipment selection. Course fees include full day seminar, continental breakfast, and lunch. **Attendees must bring a Wrightsoft software compatible laptop to utilize in class.**

Who Should Attend: Anyone involved in estimating or in-home sales including service technicians, supervisors, managers and owners looking to expand business and increase technical skills.

*A Software Sponsorship may be available to a limited number of qualifying attendees. For more information please call 602-263-0115.

HPC 161 Introduction to Home Performance

Dates: November 2, 2017
Time: 5:30pm - 8:30pm
Instructor: Chris Baker/Brandon Walton
Fees: $134 Non-Members/$104 Members/$52 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: This course is designed for contractors new to the Home Performance with Energy Star® Program. We will demonstrate how to integrate HPwES into the company's current air conditioning installation plans to help customers seal their home envelope; creating energy efficiency and utility bill savings. The course will review thermal dynamics, energy modelling, pressure boundaries, and combustion safety testing as well as techniques to promote HPwES to your customers. Requirements to qualify to participate in the HPwES Program will also be discussed.

Who Should Attend: HVAC company owners, service managers, and technicians interested in learning the process of becoming HPwES qualified

HPC 162 HVAC Variable Capacity Systems

Dates: November 16, 2017
Time: 6:00pm-9:00pm
Instructor: Travis Howard
Fees: $134 Non-Members/$104 Members/$52 APS Qualified Contractor Rate
Credits: 4 Continuing Education Credits/3 NATE Continuing Education Hours
Location: ELA Training Center, 2702 N. 3rd Street, Suite 2020, Phoenix, AZ 85004

What You Can Expect: This course is course will discuss the different types of systems from 2 speed compressors to true variable speed compressor systems. We will go over controls, design differences, operation and servicing procedures.

Who Should Attend: Service Managers, service technicians and installation technicians.

Quality Instructors = Quality Education

Bo Rogers
Mr. Rogers has been working in the HVAC industry since he was big enough to carry a toolbox. He puts to use all the things he has learned over the years while installing, servicing and selling furnaces, air conditioners and heat pumps in the Midwest and Southwest. He enjoys learning about new technologies and methods in the industry, and especially enjoys sharing the knowledge he has gained with others.

Joel Harris
Mr. Harris has worked for over 20 years in the HVAC industry. Joel's extensive residential and commercial expertise is in troubleshooting, special applications and design which contribute to his successful training and management abilities utilized in daily operations.

Robert MacPherson
Mr. MacPherson has worked in the HVAC/R industry for over 25 years. He has an associate's degree in Mechanical Maintenance Engineering from RSI and is a past member of RSES. He has worked in residential, commercial refrigeration, facilities maintenance and in the educational field. He is currently semi-retired, owns a business and works part-time for an electrical company.

Travis Howard
Mr. Howard has been working in the HVAC industry in the Phoenix metro area since graduating from Universal Technical Institute (UTI) June 1990. Travis has spent his career in residential and light commercial services. He is NATE certified and has the Heat Pump Master Technician certification through the Arizona Heat Pump Council. Travis is a firm believer in continuing education to stay up-to-date of the latest advancements, standards, and technology in the HVAC industry. As the Assistant Service Manager at Howard Air he utilizes his experience to provide technical support and training to all service technicians and installers to aid in problem solving and continuing education. He also provides field technical support to solve operational problems and give personal attention to customers to ensure a high l evel of satisfaction during complicated HVAC system problems.

Butch Owens
Mr. Owens is currently a Partner and Service Manager for Mech-Line Services LLC and has worked in several capacities for the refrigeration industry for over 24 years. Mech-Line Services is ABB HVAC Drives Manufacturer's Representative in Arizona. Butch holds over 28 Variable Frequency Drives, Motors, Hardware and related Certifications with ABB pertaining to AC Drives and Induction Motors. He is also EPA 40 CFR and Section 609 EPA Certified for refrigerants high and low pressure and is most honored to be part of a development council for ABB HVAC Drives for future products. Butch has taught for the Arizona Heat pump Council since 2011 and is also an Adjunct Instructor for the Electric League of Arizona's Electrical Continuing Education Program done in partnership with GateWay Community College.

Carl Bartoli
Mr. Bartoli has been in the HVACR industry for 35 years and is starting his 30th year with Donley Service as Director of Operations. Carl over sees all departments, air conditioning and plumbing service, installation, solar and call center. Mr. Bartoli takes an active role in training Donley Service's 60 employees, for technical, marketing and customer service.

Rich Porter
Mr. Porter has been in the service industry for over half his life. He is a NCI CO/Combustion Analyst and is also N.A.T.E. certified in the installation and service of gas furnaces, air conditioners, and heat pumps. Rich is proud to serve on the Professional Advisory Committees for RSI, AAI, UEI, and EVIT. He enjoys working with other industry professionals to help shape curriculums and better prepare students for a career in the HVACR industry.

FALL 2017 COURSE REGISTRATION

Special Discounts May Apply

The APS Qualified Contractor Discount Rate applies only to contractors participating in the APS Residential Qualified Contractor Program. For more information on how to take advantage of these great training rates and other program benefits, call the APS Energy Answer Line at 602-371-3636.

Student Name: _____ Date: _____

Company: _____ ***E-mail: _____

Position: _____

Mailing Address: _____ City: _____ State: Arizona

Zip: _____ Daytime Phone: _____ ***Fax #: _____

Person/Company responsible for payment: _____

Are you a member of the ELA? ☐ Yes ☐ No Are you an APS Qualified Contractor? ☐ Yes ☐ No

*** We may use this fax number or email address to inform you of similar educational courses. **Email required.**

Cancellation Policy and No-Shows

A full refund will be issued as long as **written notice is received 48 hours** prior to the class starting time. Due to the number of courses held and registrations received, we do not provide written or verbal confirmation. Returned checks are subject to a $30.00 returned check fee. **All registrations received by mail or fax are confirmed registrations unless cancelled within the proper time frame. Participants are charged the full fee amount if they register but do not attend. There are no refunds for no-shows.**

** _____Please initial here to indicate you have read, understood, and agreed to this cancellation policy.

Rates:	Non-Member Rate	Member Rate	APS Qualified Contractor Rate
☐ HPC 126 Refrigeration Fundamentals	$144	$114	$57
☐ **Master Heat Pump Technician Cert. Fee**	$50	$30	
☐ HPC 101 Refrigeration Theory & Systems Diagnosis (Session 1)	$150	$120	$60
☐ HPC 101 Refrigeration Theory & Systems Diagnosis (Session 2)	$150	$120	$60
☐ HPC 102 Charging, Piping & Dehydration	$170	$140	$70
☐ HPC 103 Electrical Fundamentals for Heat Pumps	$144	$114	$57
☐ HPC 104 Control Systems for Heat Pumps	$144	$114	$57
☐ HPC 105 Customer Service & Selling Skills	$144	$114	$57
☐ HPC 106 HVAC Code & Safety	$204	$174	$87
☐ HPC 107 Airflow Dynamics (Session 1)	$144	$114	$57
☐ HPC 107 Airflow Dynamics (Session 2)	$144	$114	$57
☐ **HVAC System Consultant Series Cert. Fee**	$50	$30	
☐ HPC 108 Wake Up to Heat Pumps	$134	$104	$52
☐ HPC 111 Proper Installation Procedures	$189	$158	$79
☐ HPC 115 Manual J	$219	$184	$92
☐ HPC 116 Duct Design/Manual D	$219	$184	$92
☐ HPC 137 Consulting for Better Sales	$144	$114	
☐ HPC 139 Duct Diagnostics & Repair	$189	$164	$82
☐ HPC 149 HVAC Troubleshooting	$134	$103	$52
☐ HPC 155 Gas Furnace Safety & Operation	$168	$138	$69
☐ HPC 158 Wi-Fi Controls	$134	$104	$52
☐ HPC 159 Zoning Systems	$134	$104	$52
☐ HPC 160 Wrightsoft - Using Right-J for Sizing Calculations	$269	$219	
☐ HPC 161 Introduction to Home Performance	$134	$104	$52
☐ HPC 162 HVAC Variable Capacity Systems	$134	$104	$52

**The Heat Pump Council is now providing heavy hors d'oeuvres & soft drinks served from 5:30 - 6:00pm.*

Method of Payment: Payment must be received prior to the start of class. ***Please provide email above to receive credit card receipt.***

Total: _____ Check enclosed #: _____ ☐ M/C ☐ Visa

Credit Card#: _____ 3 Digit Code: _____ Exp. Date: _____

Exact Name on Card: _____ Signature: _____

Billing Address if different: _____ City: _____ State: AZ Zip: _____

REGISTER ONLINE AT: ***http://edu.elaz.org***

Or mail registration and payment to: Arizona Heat Pump Council, 2702 N. 3rd St, Suite 2020, Phoenix, AZ 85004, or fax to: 602-274-0029 or email to education@elaz.org.

Call 602-263-0115 for more information ***www.elaz.org***

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