

2010 HVACR & Plumbing Instructor Workshop – Tentative Schedule as of 02/04/2010. *Program schedule is subject to change.*

Day	Time	Company	Speaker	Session Title	
Wednesday	9:00 – 10:15 AM	Bradford White	TBA	Solar Water Heating	
		Testo	Jim Bergmann	Combustion Principles	
		HARDI	Richard Wirtz	Practical Psychrometrics This presentation will focus on the use of the psychrometric chart and how to implement it into your coursework. Two psychrometric examples, sensible heat and cooling with dehumidification, will be used to explain the practical application of this invaluable tool. From this information we can determine other important factors relating to the capacity of the system. Understanding the properties of air and how air is affected by various temperature and humidity processes is the key to unlocking the mystery of the psychrometric chart	
		NAOHSM		Train the Trainer (9AM-12 PM) This session is geared towards those who teach adults. Attendees will learn some basic skills needed to effectively teach adults, how to prepare for class, developing materials and evaluation techniques. This is an ongoing customized program NAOHSM has developed through Penn State University.	
	10:15-10:30 AM	BREAK			
	10:30-11:45 AM	Legend Valve	Bill Werthman	Radiant Heating & Cooling: What Makes it Great for Sustainability This session covers the fundamentals and the benefits of radiant heating. Learn about radiant heating principles by exploring the comfort, flexibility and efficiencies of radiant heating through material samples, demonstrations and open discussion.	
		HARDI	Richard Wirtz	Practical Psychrometrics This presentation will focus on the use of the psychrometric chart and how to implement it into your coursework. Two psychrometric examples, sensible heat and cooling with dehumidification, will be used to explain the practical application of this invaluable tool. From this information we can determine other important factors relating to the capacity of the system. Understanding the properties of air and how air is affected by various temperature and humidity processes is the key to unlocking the mystery of the psychrometric chart.	
		Appion	Dave Boyd	Green=System Evacuation & System Dehydration The evolution of increased efficiencies (SEER), the transition to non-chlorine based refrigerants that utilize higher refined oils that are less tolerant to moisture require the proper evacuation and dehydration of systems that are properly charged to manufacturers specifications	



		ACCA	Wes Davis	HVAC System Performance Testing Tomorrow's GREEN technicians should seek to maximize system performance during system installation and during maintenance inspections. Peak performance should be sought standard efficiency HVAC systems as well as those that are very high efficiency. This session discusses the theory involved in measuring HVAC system performance, factors to consider, nationally-recognized standards, and approved procedures.
		NAOHSM		Train the Trainer (continued) This session is geared towards those who teach adults. Attendees will learn some basic skills needed to effectively teach adults, how to prepare for class, developing materials and evaluation techniques. This is an ongoing customized program NAOHSM has developed through Penn State University.
12:00-1:00 PM	LUNCH			
1:00-3:00 PM	Opening General Session		Tom Applegate, ACTE Bryan Albrecht, President of Gateway Technical College Kathy Oliver, Assistant State Superintendent at the Maryland State Department of Education Paul Hallam, Instructor	Your Survival Guide to the Changing Face of Education The opening session of the Workshop will be divided into two parts - the first part will be an overview of the changes happening in secondary and postsecondary education, presented by Tom Applegate (ACTE). The second part is a panel discussion that will look at issues that affect instructors.
3:00-3:15 PM	BREAK			
3:15-4:45 PM	Legend Valve		Robert Vick	Sustainability for the Next Generation of Plumbers This session will include discussion about sustainable plumbing concepts include new alternative joining systems, the current green movements and how they affect the plumbing trade, and building information modeling (BIM) and its impact on plumbing. Hands-on demonstrations will be utilized. Demonstration videos will be provided to attendees.
	Bradford White		TBA	Solar Water Heating
	ACCA		Wes Davis	HVAC System Performance Testing Tomorrow's GREEN technicians should seek to maximize system performance during system installation and during maintenance inspections. Peak performance should be sought standard efficiency HVAC systems as well as those that are very high efficiency. This session discusses the theory involved in measuring HVAC system performance, factors to consider, nationally-recognized standards, and approved procedures.
	Pearson/Prentice Hall		TBA	TBA
4:45-5:45 PM	CARE Meeting			
7:00-9:30 PM	Reception & Exhibits		Sponsored by: Pearson/Prentice Hall	



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Thursday	8:00 – 9:30 AM	NIBCO	Sally Boyer, Brian Kelly & Todd Schlosser	Integrating Green Building Practices into the Curriculum Learn how HVAC and plumbing systems embody the principles of green building design from product selection, regional manufacturing, joinery techniques, BIM and more. This session will address the factors increasing demand for green construction. Improve your understanding of green rating standards and how they are driving new products, technologies and opportunities.	
		Cengage	John Homan	Using Test Assessment Data to Improve Student Performance This session will demonstrate how test data is used to improve student performance through feedback to both the student and the instructor. Methods to generate data through performance in the classroom and laboratory will be discussed and apply to instructional activity.	
		A O Smith	TBA	Motors 101	
		Water Furnace	TBA	Geothermal Loops	
		Saniflo	Jose Pachas & Bob Lechner	Water Conservation Technologies: Macerators and Graywater Systems Learn about the practical uses of macerators and graywater systems in sustainable construction applications. Discover what is presently offered and where these products will impact the next generation of plumbers.	
	9:30-9:45 PM	BREAK			
	9:45-11:45 PM	General Session			
	11:45-1:15 PM	LUNCH			
	1:15 – 2:45 PM	NIBCO	Sally Boyer, Brian Kelly & Todd Schlosser	Integrating Green Building Practices into the Curriculum Learn how HVAC and plumbing systems embody the principles of green building design from product selection, regional manufacturing, joinery techniques, BIM and more. This session will address the factors increasing demand for green construction. Improve your understanding of green rating standards and how they are driving new products, technologies and opportunities	
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		A. O. Smith	TBA	Motors 101	
		Virginia Air	Jack Bartell	Today's Air Source Heat Pumps	
Appion		Dave Boyd	Green=System Evacuation & System Dehydration The evolution of increased efficiencies (SEER), the transition to non-chlorine based refrigerants that utilize higher refined oils that are less tolerant to moisture require the proper evacuation and dehydration of systems that are properly charged to manufacturers specifications		
1:15 – 2:45 PM (continued)					



		ACCA	Donald Prather	HVAC System Testing and Balancing Air is the first word in air conditioning, yet it is perceived as voo-doo magic, too tough to teach or be grasped by tomorrow's GREEN technicians. This presentation addresses the fundamentals of TAB, what technicians need to know, and the procedures that are most widely accepted by the industry. It will also discuss resources, available certifications.
Thursday (continued)	2:45-3:00PM	BREAK		
	3:00 – 4:30 PM	Genteq	Christopher Mohalley	Enhance Your Curriculum with ECM “The use and applications of ECM technology has grown more in the 5 years than in its first 15+ years of existence in residential and light commercial HVAC. Get the latest information and educational material on OEM and aftermarket ECM products from the leader in ECM technology for over 20 years. Whether you are looking to introduce or enhance your curriculum or just want to review what you know, this will provide everything you need to educate yourself and your technicians.” Hand outs will be provided at the session.
		Grundfos	Barry Naus	Hot Water Recirculation
		BSC	Kohta Ueno	Net Zero Homes (NZE): The Myths, the Realities, & What You NEED to Know NZE Homes are being mass produced in certain building communities. The DOE promotes these to decrease America's dependence on foreign fuel supplies. Currently, the new homes market is taking a financial “breather”, so DOE is focusing on “existing homes”. What do the green collar workers of tomorrow need to know today to ensure they are prepared to meet this future market?
		ICC	Bob Guenther	Trends in the Energy Codes from 2000 – 2009 Over the last nine years the International Energy Conservation Code (IECC) has evolved significantly. It has also been widely adopted by states, cities, and other municipalities that seek to be GREEN, and gain broader acceptance every year. The 2012 code will seek to conserve 30% more energy than the 2009 IECC. What can tomorrow's technicians learn from the trends in the building codes over the last decade? What proposed code changes could affect the next decade.
		Virginia Air	Jack Bartell	Energy Savings Technology
	Alabama Power	Joel Owen	Creating the Ideal HVACR Lab Discover ways to maximize your HVACR Lab by incorporating simulators and live equipment; what to look for when purchasing simulators.	
	4:30-7:00 PM	DINNER/FREE TIME		
7:00-9:30 PM	Reception & Exhibits		Sponsored by: Delmar/Cengage	



Friday	8:15 – 9:30 AM	Grundfos	Barry Nauss	Hot Water Recirculation
		Cengage	Marissa Maiella	Maximizing Your Use of Instructor Resources from the Publisher This session will focus on the robust instructor supplements that are available to instructors to aid in their teaching of both HVACR and Plumbing principles. The supplements contain everything from computerized testbanks of questions, to comprehensive instructor guides, to PowerPoints for each chapter. The goal of the session is both to inform instructors about what is available to them and to demonstrate the easy use of the resources.
		Crown Boilers	Jason	Designing Residential Hot Water Systems
		Isaac Univ.	Greg Goater	Electrical Code for HVAC In many locals nationally, HVAC technicians do their own power wiring for their equipment, and yet it is many times ignored in trade schools and training programs as being “outside” the trade. Virtually every rule involving power wiring is covered in the National Electric Code (NEC). Some have said that it takes a “Philadelphia Lawyer” to read the NEC, but in this session we will endeavor to learn how to use the code book in a “user friendly” manner to answer such questions as: What is that MCA rating on the condensing unit? How do I size a conductor to match the load? How do I correct for temperature and/or “bundles”? What is voltage drop and how do I calculate it? How many conductors can I put into a box? In a conduit? How many amps does a standard motor draw? What is that MOCP rating on the condensing unit? How do I size an overcurrent protection device? What is a “disconnecting means”? Is this existing electrical service large enough to add air conditioning? Handouts will be provided. Bring a copy of the NEC if you have one.
		ACTE		Government Funding Opportunities: Stimulus Package
		CARE	Suzie Sands	CARE Blog: Online Resources
		9:30-9:45 AM	BREAK	
	9:45 – 11:00 AM	Arzel	Joe Ramunni	The Latest Advances in Zoning Design and Practices Residential zoning has made tremendous strides in the past decade in regards to designing for system performance, equipment interfacing, delivered capacity and static pressure control. The components of zoned comfort that are critical to meet the needs of today’s HVAC consumers will be discussed. Attendees will learn the most effective methods of applying zoning in the expansive residential and light commercial retrofit zoning markets. The information taught will be from a generic perspective and can be applied across the spectrum of products and solutions for directing airflow.
		Simutech	Eugene Silberstein	Using Simulation Software to Effectively Teach Heat Pumps In this session we will discuss the value of using computer-based simulators to



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			supplement theory-of-operation and troubleshooting lessons. By exercising and strengthening the cognitive skills needed to be an effective service technician, students concentrate on the troubleshooting methods, creating a logical path for this all-important process to take. Using simulated tools, gauges and test instruments, students perform service-related tasks on heat pumps with computer inserted faults, to determine the cause for the malfunction. The session will include a live demonstration of an air-to-air heat pump simulator.	
		CARE	HVAC Instructor Exchange	
		PHCC-EF	Merry Beth Hall	Plumbing Instructor Exchange This facilitated session will include information of interest to plumbing instructors including creating the ideal plumbing lab and a host of other topics generated by session participants. Come prepared with your ideas to share with other instructors. Bring copies of creative lesson plans, special projects, or any other curriculum-enhancing ideas you have to share with your fellow instructors.
	11:00-11:15 AM	BREAK		
	11:15-12:00 PM	Closing Session		
12:00-1:00 PM	LUNCH			
1:00-5:00 PM	Free ICE, NATE and RSES Exams			

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