



Dayton ASHRAE “News You Can Use”

December 1, 2007

Continuing Education, PDH and CEU Opportunities

(Additional information on last month’s topic at the request of some members)

Need more training or education? Sign up for HVACR classes at Sinclair Community College. Credit and non-credit registrations available. Cost for Montgomery County residents is only \$45/credit hour. **Note: these courses count for PE License renewal continuing education requirements! Course descriptions are included below. Want more info on the classes listed below? For more information or to view the master syllabus for a course, go to www.sinclair.edu/bulletin/ and select the course desired.**

ETD 121 Ethics for the Engr Tech Professional (2 cr)	M	1 – 3:40 PM	5012
	W	6 – 8:40 PM	5012

Introduction to the core skills of an engineering professional: technical skills, soft skills and team management techniques. Concepts of lifelong learning, continued personal improvement, engineering ethics, working in a diverse industry and future trends in engineering technology.

HVA 140 HVAC installation Techniques (3 cr.)	T	6 – 9:30 PM	Eaker
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Basic practices required for new installation & replacement of HVAC equipment including an introduction to sheet metal skills, copper & black pipe plumbing & power connections. Hands on skills and code requirements will be stressed along with good safety practices.

HVA 144 Introduction to HVAC Systems (3 cr.)	R	6 – 9:30 PM	5021-D
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Basic concepts and theory of heating, ventilating, air conditioning and refrigeration systems, including basic use of required instruments to measure temperature, humidity, airflow and refrigerant pressures.

HVA 160 Basic Heating Systems (3 cr.)	F	8:30 – Noon	5021-D
	W	6 – 9:30 PM	5021-D

Introduction to the basic concepts of all heating systems found in light commercial applications for the experienced and inexperienced in HVAC. A comprehensive presentation of HVAC systems, including rooftop packaged systems, packaged low pressure boiler systems, and packaged unitary heaters. Innovations in high efficiency energy conservation and zone control will be discussed.

HVA 170 Air & Water Distribution systems (5 cr.)	TR	6 – 9:15 PM	5012
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(Especially good for designers and those who want to know more about how air and water systems are designed and operated.)

Theory and practice of fluid flow in HVAC distribution systems, including water system design and analysis, duct design and analysis, fan and pump selection, valve and damper selection, and evaluation of overall air and water system performance. Hand calculations and use of computer-based design and analysis tools; selected hands-on laboratory studies reinforce basic principles; proper installation practices are also included.

HVA 180 Boilers in HVAC systems (3 cr.)	W	8:30 – Noon	5021-D	
	Or	R	6 – 9:30 PM	5021-D

A reference course for experienced and inexperienced HVAC professionals. A comprehensive study of low pressure and high pressure hot water/steam generation, including the fundamentals of heat generation in water-based heating systems and gas-fired radiant heating systems.

[American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.](http://www.ashrae.org)

Dayton Chapter

<http://www.daytonashrae.org>



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HVA 184 Basics of Cooling (3 cr.) M 8:30 – Noon 5021-D
Or TR 4:15 – 5:55 5021-F
Or T 6 – 9:30 PM 5021-D

Foundations in the applications of cooling principles in light commercial equipment. Designed for those with hands-on HVAC responsibilities or the desire to gain a deeper understanding of the principles behind the refrigeration cycle. Major components include refrigerant flow through equipment, applications of equipment to the refrigeration cycle, heat transfer fundamentals and preparation for the EPA refrigerant handler's certification exam. Note: students take the EPA exam the last night of the course for no additional cost.

HVA 243 Control for Bldg HVAC Systems (3 cr.) W 6 – 9:30 PM
4012-B

Theory and design practice of control systems in use in the heating and air conditioning of commercial and industrial applications.

HVA 254 Advanced HVAC Applications 2 (3 cr.) M 6 – 9:30 PM 5012

Major topics include ASHRAE 62, ASHRAE 90.1, Filtration, Space airflow, Acoustics and economic analysis)

This continuation of MET 253 (Advanced HVAC Applications) introduces additional advanced topics in HVAC design, operation and troubleshooting including noise, vibration, acoustics, water treatment, energy recovery systems, energy modeling, energy economics, and design of HVAC systems to meet requirements of national energy codes.

HVA 272 Mechanical Cost Estimating (3 cr.) R 6 – 9:30 PM TBA

Estimating of materials, labor and equipment costs for HVACR systems. Focuses on different estimating techniques for doing various types of estimates, including budget estimates and detailed estimates for bid packages with a special emphasis on methods of estimating piping and ducting systems.

HVA 276 Current Topics in HVAC (3 cr.) MW 5 – 5:50 PM 5012

(Hybrid class – primarily on-line – will meet face-to-face each Wednesday after first week)

Identification and analysis of current issues in HVAC design, installation, operation or troubleshooting. Topics reflect relevant concerns and issues in the field.

You can view the master syllabus for any course at www.sinclair.edu/bulletin/

Contact Mike Freed, 512-5012 or Mike.Freed@sinclair.edu for one-stop registration.

Classes start on Monday, January 7, 2008.

Watch for the next issue of Dayton ASHRAE “News You Can Use”