

HVA 1221 – Heating Systems

Credit Type – Proficiency



MIAMI VALLEY
TECHPREP
CONSORTIUM

Course Description and Learning Outcomes:

<https://www.sinclair.edu/course/params/subject/hva/courseNo/1221/>

Faculty Pathway Specialist(s) (Please include name, email and office hours):

De Dawson, delacy.dawson@sinclair.edu, 937-369-5460, Since De is an ACF, he has no office hours.

Resources Needed to Offer Course (software, equipment, books [include ISBN and edition], etc. – please include any associated costs):

Refrigeration and Air Conditioning Technology, 9th Ed.

ISBN: 978-0-3571-2227-3

Hardcopy is about \$185. Other digital options exist at a much lower cost.

Requires an assembly of ducted furnaces, heat pumps, and boilers, the number of which is contingent upon the number of students one wishes to educate. Also requires basic hand tools, multi-meters, combustion analyzers, refrigerant gauge sets, again, contingent upon the number of students participating.

Costs for equipment are likely 10's of thousands.

NOTE: This equipment would allow teaching of 1201 as well.

What is the ideal format for course delivery – in person, online or blended? To what extent could this course be offered online if necessary?

There is significant hands-on, so this course must be presented Face-to-Face

How is the final grade for the course determined? (Please list all required assignments, assessments, etc.)

HW 1 – Unit 31 Gas Heat Q1 thru 15

HW 2 – Unit 31 Gas Heat Q16 thru 30

HW 3 – Unit 31 Gas Heat Q31 thru 45

HW 4 – Unit 31 Gas Heat Q46 thru 61

Test 1 – Gas Heat and Parts ID

HW 5 – Bring in drawing & pictures of venting system at home to use during Venting lecture

HW 6 – Unit 30 Electric Heat Q1 thru 7

HW 7 – Unit 30 Electric Heat Q8 thru 15

Test 2 - Combustion Analysis, Unit 30, Venting Tables and Parts IDd

HW 8 – Unit 43 Air Source Heat Pumps Q1 thru 17

HW 9 – Unit 44 Geothermal Heat Pumps Q1 thru 18

HW 10 – Unit 32 Oil Heat Q1 thru 34

HW 11 - Unit 33 Hydronic Heat & Boilers Q1 thru 30

HW 12 – Unit 34 & 35 IAQ, Comfort, Psychrometrics Q1 thru 22

Test 3 - Units 32, 33, 34, 35, 43, 44 and Parts ID

The above is based on the 8th edition of the book. This may change slightly once the 9th edition is adapted.

Homework	20%	(these three quizzes are not indicated above)
Labs	20%	
Quizzes	10%	
Attendance	5%	
Tests	45%	
Who is responsible for grading the required assignments and/or assessments? (faculty or instructor?)		
The course instructor		
What is the grading scale for the course?		
90%-100%	A	
80%-90%	B	
70%-80%	C	
60%-70%	D	
<60%	F	
Must students access the eLearn shell regularly to complete requirements?		
No		
Does the course require access to YouTube, Google Drive, etc.?		
YouTube is optional, but not required		
Additional course details or requirements important for instructors not covered above:		
Most common (or popular) degrees this course is in?		
Heating, Ventilating, Air Conditioning & Refrigeration (HVACR) Technology HVACR.S.AAS		
Sustainability and Energy Management Technology EGMT.S.ATS		