



HVACR SYLLABUS

135 HVACR Heat Pumps

Advanced

Presentation Method: Mentored, asynchronous, student self-paced (you will have 60 days access to complete the course). This course is delivered through web-based distance learning online, supplemented with: textbook reading assignments, course resources, and completion of online exams and quizzes.

Prerequisites It is recommended that you have a strong working knowledge and understanding of HVACR Fundamentals, prior to enrollment into this advanced course. It is suggested that you have basic word processing skills, reasonable reading and writing abilities, some familiarity with computer usage, and a keen interest in learning. You will need access to a computer that is connected to the Internet and a reasonably current browser.

135 HVACR Heat Pumps (21 instructional hours)

Course Description:

An introduction to reverse-cycle heat pumps used in residential and light commercial applications. The course covers components and operational differences of a heat pump vs. a straight air conditioning system, troubleshooting, and solutions. Instruction aligns with ANSI/ACCA Quality Installation and ANSI/ ACCA/ ASHRAE Standard 180. **Recommended Prerequisites:** you will want to have a strong working knowledge of basic HVACR fundamentals prior to enrollment into this advanced course. This course is recognized for 21 hours of continuing education (CEHs) applicable to NATE re-certification.

Modules cover:

- What is a Heat Pump?
- Heat Pump Installation and Quality Criteria
- The Heat Pump Cooling Mode
- The Heat Pump Heating Mode
- The Heat Pump Defrost Mode
- Heat Pump Components
- Heat Pump Troubleshooting

Course Objectives: Each module begins with a description or overview of the learning module and a list of learning objectives addressed within that module. As you study, focus on the stated learning objectives.

Industry Competencies: All courses are aligned with the National Standards for HVACR education and the Building Performance industry as formulated by numerous industry groups such as ANSI/ACCA Quality Standards, ANSI/ ACCA/ ASHRAE Standard 180, AHRI, HVAC Excellence, PAHRA, PHCC, RSES, and others.

Textbooks: Delmar Cengage: Refrigeration and Air Conditioning Technology, 8th Edition

Textbook Reading Assignments:

If you enrolled in a program (group of courses): The Reading Assignments are a required part of your online learning experience. You will find them helpful during the module exams. You will find your Reading Assignments on the Reading and Terms link in each module. The Reading and Terms link may show more than one edition of a textbook, or more than one textbook. Don't worry, you will want to read the Textbook Assignment that matches the Title and Edition of the book you have, or the book assigned by your Instructor. Some courses may contain e-book access for the required reading.

If you enrolled in a single course: The Reading Assignments are supplemental (if you have access to the textbook) but, not required. You will be able to answer all the questions on the module exams from the course content. If your course contains e-book access for the reading, it is required that you do the reading assignments.

Instructional Assets: Check out the website links and additional resources for each module by clicking on the "Instructional Assets" (IA) icon. It is loaded with helpful handouts, animations, images, and possibly videos. You are responsible for including these valuable materials in your study as the information they contain may be found on the module exams.

However, links to content outside HVACRedu.net, such as a link to anything on the WWW, although valuable and informative, are provided as optional supplemental learning materials. That's because we don't own them and we cannot guarantee them. But we encourage you to expand your study to other sources on the web - it is a good habit to get into. If you notice a dead link, please let us know. Or if you would like us to add a link that you feel would complement the objectives of this module, we'd like to hear from you. Email the URL to links@campussupport.net.

Instructor: Your instructor will be available at the time that you register for a course. We rely on a pool of qualified instructors to serve our students. You are encouraged to use your instructor; he or she is there to help you be successful. Email livesupport@hvac.edu to contact an instructor.

Instructor Responsibilities: Your instructor is a Subject Matter Expert in the topic area of this course. Your instructor has also completed a rigorous Online Faculty Training program. You may read your instructor's brief biography on our web site, under "Meet the Crew". Please feel free to send him/her an email with any questions you may have throughout this course. He or she is charged with responding to your communications within 24 hours (except for weekends and holidays).

Student Responsibilities:

Online Participation: To be successful, you must move through all modules in this course with some self-discipline and complete it within the access period. The minimum recommendation is that you login and do some work in the course at least once every three days. Each module is designed to require approximately 3 hours of your time. There is more material than you need in each module. More time spent will be to your benefit. **Concentrate on the learning objectives** listed at the beginning of the module as you study. The end of module exam will open only after you've viewed at least 85% of the module slides and successfully completed the matching exercise. It's our way of using technology to guide your online learning experience. We want you to master the terminology and course content.

Exam Re-set Guidelines: Students are expected to be diligent in their studies and preparation prior to taking exams. Exams can be re-set only for two reasons: 1) the student experienced technical problems during an exam, or 2) after completing a course, the student earned a failing grade. If a

student fails one or more module exam(s), but still passes the course, there is no reason to re-set an exam. Students may email their instructor with a request to re-set an exam explaining the reasons. Instructors will re-set a technical problem exam if they verify that the student could not complete the exam. Instructors will re-set a failed exam, after a course completion, if the student demonstrates that they have performed sufficient review of the module. Final exams will not be re-set.

Spelling / Grammar: This is not a course on English or writing, however, spell check is a good thing. If the instructor cannot understand your communications he/she will contact you. Do as well as you can, remember communication is a key point for dealing with your customers on the job as well.

Academic Honesty: Don't cheat! Actually, who cares? If you cheat during this course that means that you haven't learned the content. If you haven't learned the content that means that you will not be able to perform on the job. If you can't perform on the job either no one will hire you (we assume that is why you are taking the course) or someone will fire you. Who loses?

Academic honesty is at the core of every learning community. You are expected to represent yourself truthfully in the virtual learning environment. Access to your course is protected by a username and password. It is expected that you will protect your user name and password and not share it with any other individual.

Presenting the words, ideas, or expression of another as your own in any form is plagiarism. If you are uncertain about proper citation of sources, you should ask your instructor for direction. Ignorance is no excuse. There is **no tolerance** for cheating or plagiarism in our online learning community. No credit will be awarded to an assignment or discussion that has been proven to be plagiarized.

Grading:

Category	Points Possible	Points Per Module
Module exams	700	100
Final exam	200	N/A
TOTAL:	900	
Final Grade Distribution		
75% - 100%	Pass	
0% - 74%	Fail	

Certificate of Completion: Successful completion of this course is accomplished by achieving 75% or higher. If you successfully complete the course and submit the required End of Course Survey, you will receive a downloadable Certificate of Completion at the end of your course.

For questions or to request additional information please contact Student Services by emailing studentservices@hvacredu.net.