

Heating Ventilation Air Conditioning Assessment Plan Rev. 4/21/2020

Heating Ventilation Air Conditioning	16-17	17-18	18-19	19-20	20-21	21-22
HVACB50 - Principles of Air Conditioning						
• 1. Upon successful completion of the course, the student will be able to distinguish the basic principles of heating, ventilation, air conditioning, and refrigeration.					P	
• 2. Upon successful completion of the course, the student will be able to describe, and evaluate the fundamental concepts of the refrigeration cycle.					P	
• 3. Upon successful completion of the course, the student will be able to analyze common deficiencies in air conditioning systems						P
• 4. Upon successful completion of the course, the student will be able to identify the various types of heating systems, related components, and sequence of operation.						P
• 5. Upon successful completion of the course, the student will be able to analyze and evaluate static pressure, velocity pressure, and total pressure in common duct systems						P
HVACB52 - Electricity Applied to HVAC						
• 1. Upon successful completion of the course, the student will be able to work with electricity safely				P		
• 2. Upon successful completion of the course, the student will be able to utilize acquired skills to safely diagnose and troubleshoot electrical circuits, motors, and motor controls that are typical to air conditioning and refrigeration equipment.				P		
• 3. Upon successful completion of the course, the student will be able to read and interpret electrical diagrams in various technical formats.				P		
• 4. Upon successful completion of the course, the student will be proficient in the use of various types of test equipment common to performing diagnostics on electrical circuits				P		
• 5. Upon successful completion of the course, the student will be able to correctly use appropriate tools, and methods in the replacing of electrical components applied to air conditioning and refrigeration components.				P		
HVACB54 - Refrigeration Technology						
• 1. Upon successful completion of the course, the student will be able to appraise typical operating conditions and relate them to diagnoses of common refrigeration system deficiencies, or failures.					P	
• 2. Upon successful completion of the course, the student will be able to recover, recycle, or reclaim refrigerants from a refrigeration system, and apply appropriate refrigerant charging methods.					P	
• 3. Upon successful completion of the course, the student will be able to distinguish the operational differences between high, medium, and low temperature refrigeration systems, and their common applications.						P
• 4. Upon successful completion of the course, the student will be prepared to pass the required Environmental Protection Agency (EPA) certification exam.						P
• 5. Upon successful completion of the course, the student will be able to perform preventative maintenance and system performance tests on refrigeration equipment.						P
HVACB55 - Ice Machine Service and Repair						
• 1. Upon successful completion of the course, the student will be able to evaluate common failures and deficiencies in ice machines.					P	
• 2. Upon successful completion of the course, the student will be able to employ proper methods of ice machine sanitization.					P	
• 3. Upon successful completion of the course, the student will be able to assess differences in ice machine makes in regard to sequence of operation, and components employed in the initiation and termination of the harvest cycle						P
• 4. Upon successful completion of the course, the student will be able to Evaluate water filtration systems and analyze common water flow problems						P
HVACB60 - Industrial Refrigeration Operations						
• 1. Upon successful completion of the course, the student will be able to describe and analyze a two-stage compression refrigeration system					P	
• 2. Upon successful completion of the course, the student will be able to demonstrate safe working habits and knowledge of ammonia safety.						P
• 3. Upon successful completion of the course, the student will be able to identify and analyze components and systems applied to industrial refrigeration.						P