

HVAC Mechanic - Career Ladder

Revised 8/23/2022

	HVAC Mechanic I	HVAC Mechanic II	HVAC Mechanic III
Grade:	21	23	25
Job Class Level	Entry/apprentice level work servicing and repairing heating and ventilation systems, air-conditioning systems, boilers and associated equipment.	Journey level work installing, servicing and repairing heating and ventilation systems, air-conditioning systems, boilers and associated equipment.	Master level work installing, servicing and repairing heating and ventilation systems, air-conditioning systems, boilers and associated equipment.
Education (Minimum)	H.S. diploma or GED	H.S. diploma or GED	H.S. diploma or GED
Yrs. of Experience (Minimum)	1 year experience in heating, cooling and ventilation systems.	5 years experience in heating, cooling and ventilation systems.	7 years experience in heating, cooling and ventilation systems.
Certifications (Required)	<ul style="list-style-type: none"> • Maryland HVAC apprentice license • EPA Section 608 Universal (preferred) 	<ul style="list-style-type: none"> • Maryland HVAC journeyman license • EPA Section 608 Universal 	<ul style="list-style-type: none"> • Maryland HVAC master license • EPA Section 608 Universal
Training (Required)	HVAC	HVAC	HVAC
Knowledge (Required)	Fundamental knowledge of heating, cooling and ventilation systems. Basic knowledge of operations and maintenance of buildings and building systems including electrical, plumbing and energy systems. Fundamental knowledge of methods, procedures, techniques and tools of the HVAC trade. Basic knowledge of building and fire codes, occupational hazards and safety precautions of the trade.	Comprehensive knowledge of heating, cooling and ventilation systems. Comprehensive knowledge of operations and maintenance of buildings and building systems including electrical, plumbing and energy systems. Working knowledge of electrical and mechanical components and functions of HVAC systems and/or boilers. Comprehensive knowledge of methods, procedures, techniques and tools of the HVAC trade. Working knowledge of building and fire codes, occupational hazards and safety precautions of the trade.	Advanced knowledge of heating, cooling and ventilation systems. Advanced knowledge of operations and maintenance of buildings and building systems including electrical, plumbing and energy systems. Advanced knowledge of electrical and mechanical components and functions of HVAC systems and/or boilers. Advanced knowledge of methods, procedures, techniques and tools of the HVAC trade. Advanced knowledge of building and fire codes, occupational hazards and safety precautions of the trade.
Role Summary	<ul style="list-style-type: none"> • Receives on-the-job instruction and training from a licensed HVAC journeyman to acquire and develop knowledge, skills and abilities of the trade. • Perform semi-skilled HVAC work including installation, operation, modification, maintenance and troubleshooting. 	<ul style="list-style-type: none"> • Perform skilled HVAC work including installation, operation, modification, maintenance, troubleshooting, repair and retrofitting. • Provide guidance and training to apprentice level HVAC Mechanics. 	<ul style="list-style-type: none"> • Perform highly skilled HVAC work including installation, operation, modification, maintenance, troubleshooting, repair, retrofitting and programming building automation systems and HVAC controls. • Provide guidance and training to apprentice and journey level HVAC Mechanics. • Recognized as a subject matter expert.
Level of Autonomy	Under direction of a licensed HVAC journeyman	Under moderate supervision	Under general supervision

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Core Functions	<ul style="list-style-type: none"> • Perform general HVAC maintenance related tasks. • Assist journey level mechanics in installation and repair of commercial mechanical air-conditioning, heating and ventilating equipment and control systems. • Diagnose and troubleshoot air distribution, air balancing, stratification, building insulation and vapor deficiencies. • Repair or replace failed sensors, transmitters and transducers for control systems. • Repair, retrofit or install new direct digital control systems' hardware and adjust boilers, chillers, air handling units, motor controls, refrigerant systems operating parameters from their own interface panels or the building automation systems. • Install, maintain and retrofit new electromechanical relay logic control circuits, pneumatic logic controls, damper or valve actuators and/or variable frequency drivers. • Maintain records of work performed, parts and materials used, and equipment operation logs including equipment failures and repairs. 	<ul style="list-style-type: none"> • Perform HVAC maintenance related tasks. • Maintain, install and repair commercial heating and air-conditioning systems, controls and related subsystems and components. • Diagnose and troubleshoot air distribution, air balancing, stratification, building insulation and vapor deficiencies. • Repair or replace failed sensors, transmitters and transducers for control systems. • Repair, retrofit or install new direct digital control systems' hardware; make adjustments to peripheral systems. • Install, maintain and retrofit new electromechanical relay logic control circuits, pneumatic logic controls, damper or valve actuators and/or variable frequency drivers. • Perform program maintenance work and routine checkups including backups and database server maintenance. • Monitor and inspect construction projects and contract work. • Maintain records of work performed, parts and materials used, and equipment operation logs including equipment failures and repairs. • May guide HVAC apprentices. 	<ul style="list-style-type: none"> • Perform HVAC maintenance related tasks. • Maintain, install and repair commercial heating and air-conditioning systems, controls and related subsystems and components. • Diagnose and troubleshoot air distribution, air balancing, stratification, building insulation and vapor deficiencies. • Repair or replace failed sensors, transmitters and transducers for control systems. • Repair, retrofit or install new direct digital control systems' hardware and software; make adjustments to peripheral systems. • Install, maintain and retrofit new electromechanical relay logic control circuits, pneumatic logic controls, damper or valve actuators and/or variable frequency drivers. • Perform program maintenance work and routine checkups including backups and database server maintenance. • Monitor and inspect construction projects and contract work. • Maintain records of work performed, parts and materials used, and equipment operation logs including equipment failures and repairs. • Establish safety guidelines and oversee proper handling of hazardous materials. • Provide guidance to lower level employees.

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Core Skills	<ul style="list-style-type: none"> • Customer service orientation • Proactive • Time management • Ability to proficiently and safely use tools, equipment and materials of the trade. • Ability to read and interpret blueprints, control diagrams, HVAC equipment and electrical schematic control wiring diagrams. • Ability to understand material and supply requirements. • Ability to read, understand and follow written, verbal and visual instructions. • Verbal and written communication • Basic computer skills including Microsoft office suite software. 	<ul style="list-style-type: none"> • Customer service orientation • Proactive • Time management • Ability to proficiently and safely use tools, equipment and materials of the trade. • Ability to read and interpret blueprints, control diagrams, HVAC equipment and electrical schematic control wiring diagrams. • Ability to understand material and supply requirements. • Ability to read, understand and follow written, verbal and visual instructions. • Verbal and written communication • Basic computer skills including Microsoft office suite software. • Ability to instruct and train lower level employees. 	<ul style="list-style-type: none"> • Customer service orientation • Proactive • Time management • Ability to proficiently and safely use tools, equipment and materials of the trade. • Ability to read and interpret blueprints, control diagrams, HVAC equipment and electrical schematic control wiring diagrams. • Ability to understand material and supply requirements. • Ability to read, understand and follow written, verbal and visual instructions. • Verbal and written communication • Basic computer skills including Microsoft office suite software. • Ability to instruct and train lower level employees.
Core Competencies (Proposed)	<ul style="list-style-type: none"> • Service excellence • Dependability • Accuracy and thoroughness • Accountability • Critical thinking • Problem solving • Adaptable • Communicate effectively • Integrity • Strive to learn 	<ul style="list-style-type: none"> • Service excellence • Dependability • Accuracy and thoroughness • Accountability • Critical thinking • Problem solving • Adaptable • Communicate effectively • Integrity • Strive to learn • Mentoring • Guidance 	<ul style="list-style-type: none"> • Service excellence • Dependability • Accuracy and thoroughness • Accountability • Critical thinking • Problem solving • Adaptable • Communicate effectively • Integrity • Strive to learn • Mentoring • Guidance

This document is not intended to provide a complete list of duties and responsibilities nor does it replace the Job Class Specification or Position Description. Movement through a career path is also based on position availability, funding and business need.