

**MONTGOMERY COUNTY GOVERNMENT
ROCKVILLE, MARYLAND
CLASS SPECIFICATION**

**Code No. 005082
Grade 19**

**HVAC MECHANIC II
(Heating, Ventilation & Air Conditioning)**

DEFINITION OF CLASS:

This is lead level and skilled work involving the installation, operation, modification, repair, troubleshooting and testing of new and existing heating, ventilation and air conditioning (HVAC) systems and associated equipment. Contacts generally are with shop employees within and outside the HVAC trade, but on occasion may include contractors, energy management personnel or agency employees responsible for facility maintenance, for the purpose of providing and receiving instructions and information. An incumbent provides limited direct service or assistance to the public.

An employee in this class is responsible for leading and performing skilled and hazardous HVAC work by using the hand and power tools and equipment, parts and materials associated with the HVAC trade. The work consists of standard assignments which are conferred through work orders, sketches, specifications, mechanical drawings, models or oral instructions. The employee independently plans and assigns work to other mechanics and is responsible for determining the appropriate methods or procedures to be employed in carrying out the work. Completed work is occasionally reviewed for adherence to established trade standards. Work assignments require the employee to lead, plan, oversee and participate in the work of an HVAC crew. Guidelines are normally available however, they may not be completely applicable to specific work situations and the employee must exercise ingenuity and resourcefulness to modify and/or adopt different procedures and approaches in completing the work. The complexity of the work involves the analysis required to determine the nature of HVAC system failure or malfunction (electrical, mechanical, etc.) and make cost-effective repair or replacement. The work effort contributes to the safe and effective operation of HVAC systems in County facilities and the safety and comfort of facility users. Work is performed from ladders, scaffolding, platforms and roofs, and requires the employee to stand, stoop, bend, kneel, climb, lift and work in tiring, uncomfortable or awkward positions. Work is generally dirty, dusty and greasy and may expose the employee to sudden temperature changes when working on equipment. The nature of the work involves routine exposure to caustic chemicals, electrical hazard, or contaminated water or animal waste. An employee is required to respond to after-hours emergency service calls and may be placed on stand-by duty during severe weather or other urgent conditions.

EXAMPLES OF DUTIES: (Illustrative Only)

- Leads and participates in the work of an HVAC crew; provides instruction to and evaluates journey level and apprentice HVAC employees.
- Plans and lays out crew work to include the placement, pitch, elevation, pressure reduction, expansion and operation of various piping systems and equipment.
- Prepares estimates of materials, time and labor necessary to complete a job.
- Maintains records of work completed.
- Installs, modifies, maintains and repairs air conditioning, ventilating and heating equipment, and related systems.

- Conducts routine operational checks and inspections of air conditioning, ventilating and heating equipment, noting and correcting malfunctions of operation. Reports on defective or obsolete equipment so that replacement may be planned.
- Records information pertinent in establishing maximum performance of the equipment for the highest efficiency and conservation of energy for the facilities served.
- Installs and modifies distribution systems such as sheet metal ducts and other types of conduits along with their necessary controls and instrumentation.
- Tunes and adjusts systems to meet required standards of operation.
- Calibrates, overhauls, and replaces all associated instruments and controls in the air conditioning, ventilating and heating systems.
- Analyzes malfunctions and restores systems within operational limits.
- Repairs, replaces and overhauls compressors, pumps, chemical feeders, valves, traps, boilers, burners, monitors and other safety devices.
- Installs, maintains and repairs refrigeration equipment which includes refrigerators, freezers, and drinking fountains.
- Makes various types of joints using hard and soft silver solder, welds, caulks, rolls, and other techniques.
- Conducts water treatment tests, combustion checks and adjusts controls and feeders for optimum performance.
- Reads and interprets plans and specifications.
- Performs demolition work in the removal of air conditioning, heating and related components.
- Drives to and from work sites.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Considerable knowledge of the standard practices, methods, tools, and materials common to the HVAC trade.
- Considerable knowledge of the building and fire codes as related to work performed within the HVAC trade.
- Considerable knowledge of the occupational hazards and safety precautions of the trade.
- Skill in the use of hand tools and test equipment.
- Ability to assign and lead the work of a crew of HVAC Mechanics and lesser skilled employees.
- Ability to use and maintain all hand and power tools used in the related trades.
- Ability to work stand-by shifts or to respond to emergency service calls.
- Ability to rig and handle all materials necessary to accomplish a job assignment.
- Ability to wear and use personal protective clothing and equipment for protection when exposed to dust, fumes, chemicals and other irritants to eyes, ears, nose, skin and respiratory system.
- Ability to conduct failure analysis and to modify equipment and make recommendations both in equipment changes and preventive maintenance.
- Ability to work from mechanical drawings, specifications, sketches, and work orders and prepare material lists and specifications.
- Ability to prepare and maintain records.
- Ability to deal tactfully, effectively and equitably with people.
- Ability to complete necessary training and examination requirements for journey level license issued by the State of Maryland.
- Applicant must pass a County administered test of recognition of colors commonly used in the HVAC

trade.

MINIMUM QUALIFICATIONS:

Experience: Three (3) years of experience as a journey level HVAC Mechanic.

Education: Graduation from high school or High School Certificate of completion recognized in the State of Maryland.

Equivalency: An equivalent combination of education and experience may be substituted.

Physical Ability:

- Ability to occasionally lift items that weigh as much as 100 pounds or more and to frequently carry items that weigh up to fifty (50) pounds.
- Ability to perform work inside and outside year round, from scaffolding, high ladders, platforms and roofs, and to work overhead or in stretched, cramped and awkward or tiring and uncomfortable positions.

LICENSE:

- Possession and maintenance at all times of valid Class "C" (or equivalent) driver's license from the applicant's state of residence.
- Possession of a Journey level HVAC license issued by the State of Maryland.
- Possession of Environmental Protection Agency Universal Recovery and Recycling certification.

Note: There will be no substitutions for this section.

PROBATIONARY PERIOD:

Individuals appointed to this class will be required to serve a probationary period of six (6) months, during which time performance will be carefully evaluated. Continuation in this class will be contingent upon successful completion of the probationary period.

MEDICAL EXAM PROTOCOL: Core II Exam.

Class Established: August 1962

Revised: April 1968

November 1970

May 1971

July 1974

December 1984

April 1989

Classification Study: May 1991 (M)

May 1994

December 2001

Classification Study: October 2002 (M)

April 2010

August 2013