

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

**Code No. 005325
Grade 20**

ENERGY MANAGEMENT SYSTEMS TECHNICIAN

DEFINITION OF CLASS:

This is technical work primarily involving monitoring heating, ventilation and air conditioning (HVAC) energy management systems in County facilities and troubleshooting control systems to ensure proper and efficient operation. Contacts are with other agency employees, facility occupants and contractors and control system vendors to exchange information and solve problems. An incumbent offers limited direct service or assistance to the public.

An employee in this class is responsible for monitoring HVAC systems operation in County facilities, troubleshooting and correcting computer control systems malfunctions, evaluating computer control system/HVAC system interface, and modifying control systems to improve systems operation and efficiency. The work requires an in depth knowledge of the principles, concepts and methodology of HVAC equipment operation and computer systems, as well as an understanding of engineering principles to independently monitor, test, measure and evaluate system applications. Work is planned and performed independently, based upon agency policies, procedures, equipment specifications and an employee's education and training. Work is evaluated for proper and efficient operation of HVAC systems. An employee chooses the appropriate procedure and method to accomplish the work, adapting procedures or methods as necessary. The complexity of the work is characterized by the need for an employee to investigate and analyze the significance and meaning of various HVAC control system problems or malfunctions and to determine the proper course of action to restore operation or alter operation to increase efficiency. The work of this class directly affects the operation of HVAC systems and the comfort of facility users. Work is performed in a computer room, machine rooms and various County facilities. The work involves exposure to various hazards such as power tool use, moving parts on equipment or machines, work on roofs or tall ladders and exposure to energized circuits. The work requires light physical effort such as long periods of standing; frequent bending, crouching or stooping; climbing ladders and occasional lifting of objects up to 50 pounds.

EXAMPLES OF DUTIES: (Illustrative Only)

- Monitors the operation of HVAC systems connected to computerized building energy management systems to ensure proper sequence of operations.
- Troubleshoots and corrects computer malfunctions; evaluates computer/HVAC interface problems and corrects problems.
- Evaluates operation of systems; programs systems for better operation and increased energy savings.
- Performs maintenance of the computerized building management systems to ensure peak operating efficiency.
- Evaluates existing buildings for installation of computerized energy management systems. Prepares schematic diagrams and programs energy management systems.
- Reviews plans, schematics and specifications for energy management systems design in new and renovated County buildings and provides technical advice on adequacy of systems to project managers.
- Oversees, inspects and tests installations in new construction and renovation to determine proper

operation.

- Provides guidance and oversight to contractors and HVAC Technicians in troubleshooting system malfunctions and the repair of related equipment.
- Provides assistance and training to mechanics on computerized HVAC equipment.
- Installs, repairs, and maintains HVAC control devices associated with the energy management systems; tests, measures, calibrates, repairs and replaces electric, pneumatic and electronic temperature control devices to ensure efficient HVAC system operation.
- Analyzes utility bills to determine performance of energy management systems. Prepares graphs and reports of energy usage.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Thorough knowledge of automated building temperature control systems (such as Powers 600, Honeywell W7505, and Paragon EC-128) and thorough knowledge of the HVAC systems that the automated building temperature systems interface with in order to install, monitor, maintain and troubleshoot temperature control systems.
- Knowledge of electronic circuitry technology employed in HVAC control systems.
- Knowledge of computer operation and programming languages such as Fortran, Basic or Pascal.
- Knowledge of mathematics such as algebra and geometry, as well as methods and techniques relating to standard engineering computations, design, testing, and inspection.
- Ability to read and interpret engineering plans and construction drawings, especially temperature control diagrams and schematics.
- Ability to access and interpret computer control system diagnostics and effect system changes.
- Ability to work independently in the field, especially in troubleshooting operations.
- Ability to communicate effectively with others.

MINIMUM QUALIFICATIONS:

Experience: Thorough (5 years) experience operating, programming, troubleshooting, installing and maintaining computerized energy management HVAC control systems.

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.

LICENSE:

- Possession and maintenance at all times of a valid Class "C" (or equivalent) driver's license from the applicant's state of residence when required for job-related duties

PROBATIONARY PERIOD:

Employees 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 1992
Classification Study: July 2001 (M)
April 2010
August 2013