

BUILDING AUTOMATION TECHNICIAN

DEFINITION

Under general supervision, performs a variety of skilled and semi-skilled duties to perform installation, programming, inspection, testing, and repair of electronic building systems that ensures the efficient operation of heating, ventilation, and air conditioning (HVAC) controls and campus energy management system (EMS) to meet both comfort and energy conservation requirements; assists in the installation, programming, inspection, and testing and repair of centralized building fire alarm and notification systems, automated light controls, and other low voltage electrical and electronic devices and systems.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Manager, Energy Services.

CLASS CHARACTERISTICS

This is a journey-level class responsible for performing skilled and semi-skilled duties related to the installation, programming, inspection, testing and repair of electrical and electronic building systems at District buildings and facilities required to ensure that all are maintained in a safe and effective working condition and provide the highest level of safety for District and public use. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This classification is distinguished from other facilities maintenance classifications in that it specializes in building automation systems maintenance repair requiring additional skill and training.

EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative Only)

- Performs skilled and semi-skilled preventative and predictive maintenance, inspection, testing, repair, and installation of digital, electrical, and electronic control equipment related to air conditioning, fume hood, and exhaust systems.
- Researches and implements ways to fully utilize and improve existing systems to assure the most efficient overall campus energy utilization.
- Performs a daily review of the system, troubleshoots and makes sure necessary changes are made in programming and calibration to ensure proper operation of controls and instrumentation.
- Identifies energy conservation measures (ECM's) throughout the campus by making visual inspections and identifying deficiencies.
- Assists with troubleshooting and analysis to ensure maximum reliability and efficiency.
- Estimates labor, materials, and equipment needed for assigned projects; monitors inventory levels of materials and equipment; orders, receives, and maintains inventory of materials and equipment as needed.
- Records and maintains work and material records.
- Observes safe work methods and makes appropriate use of related safety equipment as required.
- Maintains work areas in a clean and orderly condition, including securing equipment at the close of the workday.
- Provides needed information and demonstrations concerning how to perform certain work tasks to new employees.
- Assists other District employees with various projects related to the college's energy management systems.
- Learns and applies emerging technologies and, as necessary, to perform duties in an efficient, organized, and timely manner.

- Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles, practices, methods, equipment, materials, and tools used in building automation operations.
- Operation of HVAC controls and campus energy management system (EMS) to meet both comfort and conservation requirements.
- Automated building management systems, energy conservation equipment and related components.
- HVAC, lighting, systems and controls.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Occupational hazards and safety equipment and practices related to the work.
- Standard office practices and procedures, including the use of standard office equipment, basic record-keeping, and arithmetic.
- Safe work practices, including safe driving rules and practices.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, students, and District staff, including individuals of various ages, disabilities, socio-economic and ethnic groups.

Skills & Abilities to:

- Perform a variety of complex technical tasks related to building automation installation, repair, and maintenance work.
- Perform basic preventative maintenance of building automation equipment and systems.
- Skillfully and safely operate a variety of light equipment and power and hand tools used in the building automation field.
- Troubleshoot building automation problems.
- Determine materials, costs, and supplies required for building automation repairs and maintenance projects; recommend purchases.
- Interpret, apply, explain, and ensure compliance with applicable federal, state, and local policies, procedures, laws, and regulations.
- Understand and follow written and verbal directions, instructions, and safety rules and procedures.
- Maintain accurate logs, records, and basic written records of work performed.
- Operate modern office equipment including computer equipment and software programs.
- Read and interpret construction drawings, specifications, plans, manuals, diagrams, blue prints, and technical regulations.
- Make accurate arithmetic calculations.
- Operate a truck and observe legal and defensive driving practices.
- Organize own work, set priorities, and meet critical time deadlines.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Understand scope of authority in making independent decisions.
- Review situations accurately and determine appropriate course of action using judgment according to established policies and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade and two (2) years of experience performing duties related to the installation and maintenance of HVAC controls, energy management systems, metering devices, instrumentation, and electronic and pneumatic process controls.

Licenses and Certifications:

- Possession of and ability to maintain a valid California Driver's License.
- A certification in building automation, HVAC control technology, and computer network management from an approved institution is desirable.

PHYSICAL DEMANDS

Must possess mobility to work in and around District buildings and facilities, to operate a motor vehicle and drive on surface streets; strength, stamina, and mobility to perform light to medium physical work, to work in confined spaces and around machines, to climb and descend ladders, and to operate varied hand and power tools and equipment; vision to read printed materials and a computer screen and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 50 pounds, or heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees work in and around buildings and facilities and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with staff and/or public and private representatives and contractors in interpreting and enforcing departmental policies and procedures.