WESTERN MICHIGAN UNIVERSITY

TITLE: Building Automation Software Specialist

GRADE: ST-3

Summary:

Monitor and adjust the full range of heating, cooling, ventilation, and refrigeration equipment using the Building Automation System (BAS). Write, modify, analyze, enhance, and debug BAS computer control software programming. Troubleshoot, repair, test, and calibrate electronic components for the BAS. Troubleshoot, maintain, modify, and repair heating, ventilating, air conditioning, and equipment, including hydronic systems. Responds to trouble and emergency calls. Maintains building and classroom schedules for all buildings connected to the BAS. The incumbent must be able to perform all functions and qualifications for the ST2 Environmental Controls Person and the functions listed below.

Functions:

- Implements and facilitates the Building Automation System for HVAC controls and Indoor Air Quality. Configures, analyzes, troubleshoots, and enhances programs to balance energy management with comfort control. Monitors and adjusts computer-based Building Automation systems for proper HVAC comfort and energy management.
- Responsible for diagnosing, calibrating, maintaining, and repairing environmental control systems and processes, utilizing knowledge of electronics, direct digital control (DDC), airflow, hydronic systems, refrigeration theory, sensors, flow meters, electrical meters, and system control techniques.
- Troubleshoot, maintain, inspect, modify, and repairs heating, ventilation systems, air conditioning, and refrigeration systems and equipment, including boilers, air handlers, direct expansion (DX) and hydronic systems and components, screw, reciprocating, and absorption chillers, cooling towers.
- Attends ongoing Heating and Cooling readiness meetings weekly to insure all systems are up and running as needed.
- Provides guidance and assistance to other trades with troubleshooting, system overrides, and programming.
- Advanced Building Automation Software configuration, including systems integration, database customization, and specialty programming with the ability to configure custom reports for trends, alarms, schedules, and point lists. Must have knowledge or experience of various communication protocols such as Lon, ASD, ModBus, BacNet, BacNet over IP, as well as Niagara N4 front end software and Phoenix controls and Variable Frequency Drives.
- Installs, commissions, and troubleshoots controller software and communication bus issues for project needs.
- Works with Project Managers during construction projects to develop complete project programming, checkout, and project startup and sequencing of environmental control systems.
- Develops graphics in the Buildings Automation System and commissions new systems for operation.
- Advanced computer network knowledge and subnet practices (TCP/IP, Ethernet, routers cabling).
- Certified and able to configure software interface.
- Advanced Level Operating System knowledge (Windows installation, configuration, security, registry)

Qualifications:

- Able to read and comprehend written instructions and safety regulations regarding the performance of job duties and must have sufficient writing and mathematical skills to prepare estimates and supply requisitions.

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- Able to interpret complex blueprints, diagrams, written specifications, and operating instructions.
- Completion of a registered apprenticeship program, or an established, certified training program recognized by the University, and/or written verification of a minimum of eight (8) years' experience at the journeyperson level in the trade is required.
- Must have advanced understanding of various communication protocols (examples LON, ASD, ModBus, BackNet, BackNet over IP).
- Must have advanced understanding of various Building Automation Systems software (examples: Tridium, Niagara N4, AX, and or R2).
- Must have advanced troubleshooting, operation, programming, and maintenance of various communication protocols and Building Automation software systems.
- Must possess certification from one or more recognized control manufacturers.
- Possession of a Michigan Driver's License is required to operate any assigned vehicle to transport tools, supplies, materials, and equipment between work sites. The individual must possess 20/40 vision with or without corrective lenses to obtain a valid Michigan driver's license. The individual must be able to properly place and align coils, tubes, pipes, and other components with the ability to accurately read temperature, pressure, fluid level gauges, and air monitoring equipment.
- The individual may be required to ascend a ship's ladders and/or maintenance stairs to heights up to sixty (60') to access control systems and other equipment mounted on rooftops.
- The individual must be able to work at heights ranging from six feet to one-hundred and twenty feet (6' to 120') for two hours at a time for the entire length of the shift.
- The individual must be able to transport tools, components and devices up and down ladders to roof-tops and to lower mechanical rooms.