

## **ENERGY MANAGEMENT CONTROLS SPECIALIST**

### **DEFINITION**

Under the supervision of the Director, Energy and Utility Resources, perform skilled work in the operation, maintenance, repair, and installation of building automation systems (BAS) and heating, ventilation and air conditioning (HVAC) controls, and other related duties.

### **TYPICAL DUTIES**

Operate and program building automation systems; utilize the campus building information systems to diagnose and troubleshoot buildings' operational inefficiencies and make recommendations for corrective work; calibrate, replace, and repair field HVAC related controllers, temperature/humidity sensors, VFD's and valves utilizing appropriate hand tool and power tools; utilize computer software to operate plant automation systems; and answer trouble calls. Implement and facilitate the District Energy Management System (EMS) Migration Plan; support building automation and control system (Honeywell EMS or equivalent system); support SMUD Automated Demand Response (ADR) Program; support Lucid BuildingOS, submetering and data acquisition systems; manage run condition and operating condition overrides to ensure efficient system operation and make recommendations for corrective action; assess weekly diagnostic reports including air handler run hours, overrides, rogue zones, etc. and make recommendations for corrective action; oversee EMS air handler and primary equipment run times based on occupancy schedules; diagnose and correct controller communication problems; assist HVAC Mechanics in optimizing fan and damper tracking parameters; assess and clear trouble alarms; troubleshoot and replace faulty HVAC controls hardware; operate building automation systems and air conditioning controls using various operator workstations, computers, digital interface units, and standard HVAC tools; inspect, monitor, evaluate, and adjust mechanical systems performance for proper and efficient operation including pumps, fans, valves, dampers, terminal units, heat transfer equipment, fluid flow conditions, and air and water system balance; provide diagnostic assistance concerning campus mechanical systems in buildings, central plants, and in general campus distribution to other maintenance shops and campus departments; respond to emergency and routine service calls to provide restoration of mechanical systems operation and control with a minimum of downtime; promote, build, and maintain good relations with the campus community and peers; keep supervisor informed of campus needs, systems status, and actual or potential occupant problems; provide technical guidance and support including set-up, check-out, operation, and troubleshooting complex building automation and control systems for existing and new installations; verify functional performance of installed systems; provide technical instruction, support and training to other technicians and personnel on basic theory, proper system operations, preventative maintenance, troubleshooting techniques, typical system failures, and corrections; inspect, calibrate, repair, and install a wide range of control, sensing and actuating devices; provide recommendations on equipment/systems operation and modification for energy conservation, efficiency, and reliability; perform related duties as required.

### **QUALIFICATIONS**

#### **EXPERIENCE AND EDUCATION**

An Associate degree from an accredited institution in mechanical electrical technology or related field AND four years of experience directly related to the duties of the position; OR, completion of a certificate program from an accredited institution in mechanical electrical technology or related field AND five

years of experience directly related to the duties of the position; OR, any combination of training and/or experience totaling seven years that is likely to have provided the required level of knowledge and abilities.

Experience Requirement: One year of experience is equal to 12 months of experience at a maximum of 40 hours per week. Applicable part-time experience will be converted to the full-time equivalent for purposes of meeting the experience requirement.

Education Requirement: One year of education is equal to 30 semester units.

### **SPECIAL REQUIREMENTS**

Possess and maintain a valid California Driver's License in compliance with Los Rios Board Regulation R-8343; employment is contingent upon meeting the requirements of Los Rios Board Regulation R-8343. This position may require operating a District or personal vehicle in order to complete assigned work within the scope of the position duties. Any offer of employment is contingent upon the successful completion of a medical evaluation.

### **KNOWLEDGE OF**

Building automation and control systems, to include Honeywell Works Station Software or equivalent systems including: EBI Station (Enterprise Buildings Integrator), HMI Display (Human Machine Interface) and Quick Builder; Honeywell Controller Programming or equivalent system including: CARE (Computer Aided Regulation Engineering) and CPO Studio (Comfort Point Open); Lucid BuildingOS Energy Information System or equivalent system including: Assessing Building OS Meter Uptime Notification Reports, Maintaining Obvius, AcquiSuite Data Loggers, Modhopper wireless mesh communication system; trouble shoot and maintain electric, BTU and water submeters; heat transfer and fluid flow and the application of mechanical devices used for delivery of ventilation, steam, chilled water, hot water, and humidification; air and water balance procedures; instrumentation and calibration techniques; computer applications, including but not limited to word processing, spreadsheets, databases, desktop publishing and web-based software; communicating effectively with others orally and in writing based on the needs of the audience; applicable policies, regulations, procedures and processes; applicable federal, state, and local laws and regulations; effective customer service skills; how to compose effective correspondence and reports; the structure and content of the English language including the meaning and spelling of words, rules of composition and grammar, and rules for letter and report writing; principles and practices of effective communication; how to train others to perform specific tasks; numbers, their operations, and interrelationships, including arithmetic, at the level required to effectively perform the duties of the position; administrative and clerical procedures and systems such as filing and recordkeeping techniques in a complex business environment; modern office practices, procedures and equipment;

### **ABILITY TO**

Perform the essential functions of the position; sustain regular work attendance; work cooperatively and effectively with the public, students, faculty and staff; exercise initiative and mature judgment; interpret and apply applicable federal, state and local laws and regulations, District policies and regulations, and office processes and procedures; work as a member of a team; meet schedules and timelines; manage one's own time and the time of others; correctly follow a given rule or set of rules in order to arrange things or actions in a certain order; understand and effectively carry out oral and written directions; effectively communicate information and ideas orally and in writing based on the needs of the audience; read, write and perform mathematical calculations at the level required for successful job performance; be aware of others' reactions and adjust interpersonal skills accordingly; handle personal and private

information with discretion; prepare routine correspondence independently; effectively learn and operate equipment and software related to the duties of the position; use of technology to effectively perform responsibilities, including but not limited to, word processing, spreadsheets, databases and desktop publishing; adapt to changing technologies; work successfully with diverse populations; work with minimal direct supervision; coordinate with campus building occupants, contractors, and consultants; perform complex technical work with speed and accuracy at the level required for successful job performance; read and interpret blueprints, flow charts, schematic, and ladder diagrams, and control sequences, which may also involve various software languages and formats; analyze complex control sequences and resulting operations, and develop innovations that solve difficult technical problems; interpret, develop and diagnose functional control logic; through training and on the job experience, maintain specialized knowledge in rapidly changing technology and applications in order to effectively perform the duties of the position; use of technology to effectively perform responsibilities, including but not limited to computers, portable devices, software, and calibration equipment and related equipment standard in the industry at a level necessary for efficient job performance.

**Physical and Environmental Factors:** Ability to move about freely at construction sites; climb ladders; maneuver through tight and cramped spaces (i.e. trenches, crawl spaces, electrical and mechanical vaults, etc.). Exposure to safety hazards routinely associated with construction sites and maintenance spaces. Work in extreme and varying temperatures, confined spaces (tunnels, manholes, vaults), and intense noise environments. Wear personal protective equipment (e.g. safety glasses, face shield, gloves), lift and carry objects above shoulder up to 50 pounds, and work off ladders to download/upload field controls and relocate/install thermostats.

**TYPICAL EQUIPMENT USE (May include, but not limited to)**

Use of hand tools (i.e. wire stripper, screw driver, pliers, wrench, volt amp meter, temperature/humidity calibrator) and power tools; utilize computer software to operate plant automation systems; current office technologies including computers, printers, faxes, telephones, and copiers; other equipment common to the field to which the position is assigned.