

CLASS SPECIFICATION

SAN DIEGO CITY CIVIL SERVICE COMMISSION

INSTRUMENTATION AND CONTROL TECHNICIAN - 1523

DEFINITION:

Under direction, to design, install, test, adjust, modify, and maintain the most complex fixed and portable electronic and telemetry systems and equipment; to design, modify, and make programming and software improvements on computerized system control and data acquisition operations; to analyze problems and make necessary repairs on electronic instrumentation and controls required to interface with process control computers; to instruct Electronics Technicians in the more difficult and complex aspects of their work assignments; may lead the work of lower level staff; and to perform related work.

*** EXAMPLES OF DUTIES:**

- Designs, installs, tests, adjusts, modifies, and maintains digital and analog circuitry, microprocessor-controlled devices, variable frequency devices, electric valve actuators, and elements and components such as programmable logic controllers, process control equipment, telemetering devices recorders, sensors, and controllers on a wide variety of water and waste water treatment process instruments and devices;
- Operates computer terminals, portable programming units, or other complex electronic test equipment like spectrum analyzers to analyze and troubleshoot instrumentation and control systems, instrumentation interface with process control computers, and process control problems;
- Designs, modifies, and tests complex relay logic instruction sequences in the form of computer programs to monitor and control water or waste water treatment processes;
- May lead and instruct Electronics Technicians and other lower level staff in new and current procedures of maintenance and troubleshooting of a wide variety of electronic systems, equipment, and components;
- Performs mathematical computations for calibrating instruments and determining values of inputs and outputs in computer programs;
- Works with vendors, control computer hardware and software specialists, and plant operating and engineering personnel in determining process parameters, technical specifications for new and existing installations, and other technical matters regarding digital unit process control systems;
- Maintains records of work performed.

MINIMUM QUALIFICATIONS:

Please note: the minimum qualifications stated below are a guide for determining the education, training, experience, special skills, and/or license which may be required for employment in the class. These are re-evaluated each time the position is opened for

- * EXAMPLES OF DUTIES** performed by employees in this class. The list may not include all required duties, nor are all listed tasks necessarily performed by everyone in this class.

recruitment. Please refer to the most recent Job Description for updated minimum qualifications: <https://www.governmentjobs.com/careers/sandiego/classspecs>.

One year of full-time experience performing all phases of journey-level electronics technician work which must include diagnosing, repairing, and programming logic controllers at a water or wastewater treatment plant or industrial production plant; **AND** one of the following options: 1) successful completion of a State-accredited four-year Electronics or Communications Technician Apprenticeship Program; or 2) four years of full-time experience assembling, installing, and maintaining microprocessor-based control equipment, electronic instrumentation and control equipment (e.g., distributive control systems or programmable logic controllers), security systems, video camera, access control systems, or telemetry equipment which must include two years of full-time troubleshooting and repair experience at the component level.