

**CITY OF LOS ANGELES
CIVIL SERVICE COMMISSION**



CLASS SPECIFICATION
POSTED JUNE 1999

05-15-98

CONTROL SYSTEMS ENGINEERING ASSOCIATE, 7230

Summary of Duties: A Control Systems Engineering Associate develops, designs, selects and evaluates instrumentation and process control systems for the automatic control of a variety of dynamic processes; may supervise employees engaged in the above work; and performs related work.

Distinguishing Features:

A Control Systems Engineering Associate I is the normal entry level to the class. Employees at this level usually have little, if any, experience or special training. They initially perform the less complex professional engineering work under close supervision while learning and assisting in a variety of routine duties. As employees become more experienced, they may work independently and may be responsible for one or more large projects. Positions at this level are three-year temporary training positions under Civil Service Rule 5.30. Employees with two years of full-time paid City experience as a Control Systems Engineering Associate I and an Engineer-in-Training (EIT) Certificate will automatically promote to Control Systems Engineering Associate II.

Employees at the Control Systems Engineering Associate II level perform journey level engineering work requiring a working knowledge of engineering skills. Individuals at this level usually work independently, receive instructions in general terms and may be responsible for one or more major City projects having wide impact and significant costs. Employees may serve as a lead over a small engineering group of lower level employees.

Employees at the Control Systems Engineering Associate III level may supervise, or serve as a lead over a small group of employees, or act as a project manager or project engineer involved in work that is technically complex and requires considerable experience, skill and engineering knowledge. Two years of full-time paid, professional experience at the level of Control Systems Engineering Associate II and registration as a professional engineer with the California State Board of Registration for Professional Engineers is required for advancement to this level.

Employees at the Control Systems Engineering Associate IV level are non-supervisory technical experts who shall maintain the skills and expertise necessary to remain at the higher paygrade level. They may conduct extensive research into new technical developments and evaluate their suitability for City use, may prepare standards for technical design, may develop and conduct training for other employees about new procedures and techniques, or may act as an internal consultant to other employees or very difficult issues. These positions are assigned by department management according to Department's needs. Some positions require registration as a professional engineer with the California State Board of Registration for Professional Engineers, as determined by department management.

Examples of Duties: A Control Systems Engineering Associate:

- assists in developing, designing and evaluating conventional and computer-based systems of control for the regulation, operation and monitoring of functions such as wastewater treatment, power and pumping plants, and traffic electronic surveillance and signal control;
- prepares design specifications, material lists and requisitions;
- reviews manufacturers' and contractors' submittals for conformance with design specifications and negotiates changes to accomplish the desired objective;
- reviews and inspects the fabrication, installation and checkout of control facilities;
- monitors the startup of control facilities and debugging procedures, making adjustments to assure proper operation;
- investigates the operation of existing control systems to determine the cause of failures and recommends engineering changes necessary to prevent the recurrence of such failures;
- may supervise and review the work of subordinates;
- prepares reports and recommendations.

May occasionally be assigned other duties for training purposes or to meet technological changes or emergencies.

Qualifications: Incumbents must have the following knowledges and abilities:

A good knowledge of:

- principles and practices of electrical engineering and drafting;
- the sources of engineering information such as codes and test standards.

A general knowledge of:

- control and instrumentation theory and the application of instrumentation and control systems methods and equipment;
- electronic and pneumatic circuit design;
- methods, materials, tools and equipment used in the installation, testing and calibration of instrumentation and control facilities;
- process control software design and computer and peripheral equipment selection and application;
- data communication techniques, digital computers and computer peripherals;
- codes, safety orders and regulations governing instrumentation work.

The ability to:

- design control systems, determine operational criteria and select equipment;
- integrate control systems with communication and computer systems;
- prepare and interpret plans and specifications;
- prepare technical reports and recommendations.

Persons with disabilities may be able to perform the essential duties of this class with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis and depends in part, on the specific requirements for the job, the limitations related to the disability and the ability of the hiring department to reasonably accommodate the limitations.

Minimum Requirements: Graduation from a school of engineering in a recognized four-year college or university with a degree in Engineering, which includes at least 24 semester units or 36 quarter units of Electrical Engineering core courses or 12 semester units or 18 quarter units of Chemical or Sanitary Engineering core course work; or possession of a valid Engineer-in-Training certificate recognized by the California State Board of Registration for Professional Engineers.

Licenses: A valid California driver's license may be required.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.