

INSTRUMENTATION SPECIALIST

General Statement of Duties and Responsibilities

This class of positions encompasses responsible instrumentation work, including the installation, repair, maintenance, calibration, adjustment and servicing of electrical, electronic, mechanical, pneumatic and telemetric, instrumentation and controls and communications equipment in wastewater treatment facilities, water supply facilities, air monitoring stations, vehicle emission testing laboratories, associated support facilities and similar or related facilities. There are three Assignment Levels within this class of positions. All personnel perform related work.

Assignment Level I

Under general supervision, performs work in the tasks described below:

Examples of Typical Tasks

Installs and sets-up instruments, controls and telemetering equipment and related equipment.

Makes periodic inspections of instrumentation and metering equipment and controls and reports unusual malfunctions; performs routine preventive maintenance.

Dismantles and reassembles equipment for corrective maintenance or for replacement in whole or in part. May work with other personnel to facilitate the repair and replacement of components.

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INSTRUMENTATION SPECIALIST (continued)

Assignment Level I (continued)

Examples of Typical Tasks (continued)

Operates testing and calibrating equipment such as the following: analog and digital multimeters, frequency meters, signal simulators for resistive temperature devices; millivolt, milliamp, frequency and pressure oscilloscopes; chlorine residual analyzers; PH meters; vehicle exhaust emissions analyzers; and other diagnostic equipment.

Installs, maintains, repairs and performs other servicing routines required to assure continuous radio, phone and telemetry system operations.

Troubleshoots and configures equipment and systems, such as programmable logic controllers, telemetering systems and distributed control systems.

Troubleshoots and repairs meteorological and/or air monitoring stations and their associated telemetering systems.

Troubleshoots and repairs communications systems including, but not limited to, telephone systems, public address systems, walkie talkies, repeaters and radio base stations.

Troubleshoots and repairs radio frequency devices used for instrumentation and control.

Troubleshoots and repairs control system equipment such as automatic chemical feed equipment, dissolved oxygen control equipment and automatic flow control devices.

Troubleshoots and repairs fire alarm and security systems.

Makes modifications and improvements in equipment, instrumentation and controls.

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INSTRUMENTATION SPECIALIST (continued)

Assignment Level I (continued)

Examples of Typical Tasks (continued)

Reads and interprets flow and wiring diagrams, plans and specifications; works on energized circuits, operating equipment and/or control systems.

Prepares instrumentation and control maintenance schedules and spare parts lists.

Acts as liaison with vendors concerning replacement parts and system operation, modification and upgrading.

Installs small piping and tubing where necessary.

Attends training to keep current with technology and equipment, as required.

May oversee and train Instrumentation Specialist Trainees.

Keeps records and maintains logs of work performed against daily, weekly and monthly assignment sheets and completes record of supplies and parts received and/or issued for job assignments.

Drives a motor vehicle.

Assignment Level II

Under direction, with some latitude for independent judgment and decision-making, supervises and trains Trainees and Specialists performing the duties described under Assignment Level I. In addition, performs tasks such as the following:

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INSTRUMENTATION SPECIALIST (continued)

Assignment Level II (continued)

Examples of Typical Tasks

Inspects, tests and supervises the installation of more complex instruments and equipment.

Makes routine inspections of work performed by subordinates and instructs them in the use of more complex diagnostic, testing and repair equipment.

Determines long and short range staffing, material and equipment needs making recommendations relevant to the assigned locations.

May incidentally perform the tasks described in Assignment Level I, above.

Assignment Level III

Under general direction, with latitude for independent judgment and decision, oversees the instrumentation control operation of a very large area, one very large facility or a number of smaller facilities as described in Assignment Levels I and II above. In addition, performs the following tasks:

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INSTRUMENTATION SPECIALIST (continued)

Assignment Level III (continued)

Examples of Typical Tasks

Performs extremely responsible and complex work in planning coordinating and overseeing the development and the implementation of corrective and preventive maintenance programs, inspection, testing and modifications of systems and equipment.

Supervises a number of Instrumentation Specialists Assignment Level II and other subordinate employees.

Directs the installation of very large, complex instrumentation and control, telemetering, distributed control and communications systems and related equipment, from initiation of installation to completion.

Alerts management to critical situations and proposes solutions; prepares periodic management reports to describe significant problems and suggest alternative courses of action; prepares special reports as required.

Advises and makes recommendations on maintenance, replacement or installation of instrument systems and equipment in accordance with agency needs; provides advice relating to industry standards and new developments in the instrumentation field.

Assumes the duties of the immediate supervisor in that person's temporary absence.

May incidentally perform the tasks described in Assignment Level I and II.

INSTRUMENTATION SPECIALIST (continued)

Qualification Requirements

1. A four year high school diploma or its educational equivalent, plus four years of full-time satisfactory experience within the last ten years in the installation, maintenance and repair of electronic instrumentation and control systems, including microprocessors, and electrical and pneumatic instrumentation and control systems; or
2. Graduation from an approved trade, technical or vocational school with a major sequence of courses in electrical, electronic, electromechanical or mechanical technology, or a closely related field, plus three years of full-time satisfactory experience as described in "1" above; or
3. Graduation from an accredited community college with an Associate Degree (60 semester credits) with a major sequence of courses in electrical, electronics, electromechanical or mechanical technology, or a closely related field, plus one year of full-time satisfactory experience as described in "1" above. Thirty semester credits from an accredited college with a major in electronics may be substituted for each year of the experience described in "1" above.

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INSTRUMENTATION SPECIALIST (continued)

Qualification Requirements (continued)

Requirements for Assignment Levels II and III

1. To be assigned to Assignment Level II candidates must, in addition to meeting the minimum qualification requirements noted above, possess an additional one year of full-time satisfactory experience as described in "1" above, for a total of five years of experience.
2. To be assigned to Assignment Level III candidates must, in addition to meeting the minimum qualification requirements noted above, possess an additional two years of full time satisfactory experience as described in "1" above, for a total of six years of experience.

License Requirement:

1. At the time of appointment candidates must possess a Motor Vehicle Driver License valid in the State of New York. Employees must maintain this license for the duration of employment.
2. At the time of appointment or assignment to Assignment Level III, employees may be required to possess a Federal Communications Commission license for radio repairs.

Direct Lines of Promotion

From: None

To: None