



STATE OF NEVADA
Department of Administration
Division of Human Resource Management

CLASS SPECIFICATION

<u>TITLE</u>	<u>GRADE</u>	<u>EEO-4</u>	<u>CODE</u>
ELECTRONICS TECHNICIAN IV	33	C	6.987
ELECTRONICS TECHNICIAN III	32	C	6.986
ELECTRONICS TECHNICIAN II	31	C	6.981
ELECTRONICS TECHNICIAN I	28	C	6.988

SERIES CONCEPT

Electronics Technicians perform work requiring the application of electronic principles and practices involving the installation, maintenance, calibration, repair, programming, and modification of a variety of electronic and computerized equipment including test equipment, computers, monitors, radios (including hand held, mobile, base stations and repeaters), televisions, audiovisual equipment, alarm systems, telephone interconnect and switching equipment, data terminals and printing systems, grounding systems and surge protection equipment.

Repair, align and program units, systems, and circuits down to component or module level and troubleshoot electronic and other peripheral equipment using equipment such as oscilloscopes, digital multimeters, power supplies, signal generators, communication break-out boxes, telephone test sets, microcomputers and microprocessors, diagnostic programs, and various hand and power tools to keep equipment operational.

Repair, calibrate, program, and maintain test equipment listed above using applied theory and tools to ensure continued operation of equipment.

Install cabling and cable distribution systems in facilities allowing telephone and data systems to be interconnected and distributed to offices and buildings as necessary.

Maintain assigned inventory of parts and equipment; maintain replacement and repair stock by researching part numbers, descriptions, and prices; coordinate with vendors, private industry, federal and State agencies in the purchase, repair, maintenance, and modification of an agency's electronic and computerized equipment.

Prepare and maintain documentation of work completed, associated files and vendor information for the assigned work area to provide a tracking system for completed maintenance and installation; establish and update records and schematics pertaining to equipment installed and maintained; perform software and configuration changes and updates.

Assist agency staff with equipment usage and technical problems regarding equipment failures.

Develop custom circuit boards and sub-systems to provide necessary components which are unavailable from commercial sources, or which require modification for use with existing components and systems to facilitate reliable, efficient, cost-effective service to the agency.

Perform related duties as assigned.

CLASS CONCEPTS

Electronics Technician IV: Under general direction, incumbents in a non-correctional environment perform the full range of duties in the series concept and supervise a staff of Electronics Technicians. Supervisory duties

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CLASS CONCEPTS (cont'd)

Electronics Technician IV: (cont'd)

include, but are not limited to, performance evaluations, work performance standards, scheduling, work assignment and review, training, and discipline. In addition to supervisory responsibilities, Electronic Technician IVs are further distinguished from lower-level technicians by responsibility for comparative analysis of existing equipment with proposed improvements to ensure compatibility of old and new system parts, technology, and techniques. Incumbents adapt new systems to improve reliability, efficiency, and cost effectiveness; develop and implement technical parameters and standard practices for the installation, maintenance, calibration, and repair of electronic and computerized equipment; perform needs analysis and write detailed plans and other documentation to meet identified needs including annual work plans, improvements, and strategy.

In a correctional environment, Electronics Technician IVs lead an inmate crew and install, assemble, adjust, clean, calibrate, program and repair programmable logic controllers, fire warning/alarm systems, teleconferencing equipment, computerized escaped convict alarm system, personal objects X-ray screening machines, and door, gate, and telephone security alarm systems. Inmate performance is documented through completion of periodic progress reports. Incumbents are responsible for implementing security procedures to include securing the work area from unauthorized inmates and accountability for assigned inmates, staff, tools, and equipment. To warrant allocation to this class, supervision of a crew of inmates within and outside the institution and transportation to other institutions for performance of maintenance must be a regular and reoccurring duty.

Electronics Technician III: Under general direction, incumbents perform the full range of duties described in the series concept and function as a lead worker over lower-level Electronics Technicians to include providing input regarding performance, work assignment and review, and training staff. In addition, positions may coordinate fire alarm testing and training on fire alarm notification equipment. This is the lead worker in the series.

Electronics Technician II: Under limited supervision, incumbents perform the full range of duties in the series concept. This is the journey level in the series.

Electronics Technician I: Under close supervision, incumbents receive training in the performance of all or part of the duties described in the series concept. This is the trainee level in the series and progression to the next level may occur upon meeting the minimum requirements, satisfactory performance, and with the recommendation of the appointing authority.

MINIMUM QUALIFICATIONS

SPECIAL REQUIREMENTS:

- * Pursuant to NRS 284.4066, some positions in this series have been identified as affecting public safety. Persons offered employment in these positions, must submit to a pre-employment screening for controlled substances.
- * Some positions require the ability to lift 40 pounds over head.
- * Some positions require a valid driver's license at the time of appointment and as a condition of continuing employment.

INFORMATIONAL NOTES:

- * Some positions require passing a non-custody correctional training course.
- * Some positions require the State of Nevada certification for fire alarm 'F' card within 90 days of employment.

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MINIMUM QUALIFICATIONS (cont'd)

ELECTRONICS TECHNICIAN IV

EDUCATION AND EXPERIENCE: Associate's degree from an accredited college, university, or technical school in electronics or closely related field and three years of experience performing work involving the installation, maintenance, calibration, repair and modification of a variety of electrical and computerized equipment; **OR** graduation from high school or equivalent education and four years of experience as described above; **OR** one year of experience as either an Electronics Technician III or an Electronics Technician II in Nevada State service; **OR** an equivalent combination of education and experience as described above. (*See Special Requirements and Informational Notes*)

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):

Working knowledge of: technological advances in modern electronic equipment and systems; video theory and principles of telephone operations and data networks. **Ability to:** read and interpret blueprints, drawings and specifications; compare existing equipment with proposed improvements to ensure compatibility; repair and troubleshoot microprocessor based equipment; fabricate printed circuit assemblies including layout, soldering and wire wrapping; install, operate and troubleshoot personal computers and diagnostic software, operating systems, and interfacing hardware; determine labor and supply requirements for installation, maintenance and repair; isolate and diagnose electronic problems and equipment malfunctions; determine cabling installation and network needs according to system requirements; maintain records and prepare reports; assess requirements and determine specifications; plan and organize projects and coordinate work with others; *and all knowledge, skills, and abilities required at the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):

Working knowledge of: personnel principles and practices; functions of the different divisions of the agency to obtain needed information and/or where to direct questions; agency policy and procedure as applied to assigned projects; State and/or agency purchasing rules and regulations. **Ability to:** supervise the activities of assigned staff including project scheduling, delegating responsibility, providing training, and evaluating performance; resolve problems diplomatically with agency staff, vendors, contractors and the general public; analyze information, problems, situations, practices, and procedures to define problem areas and formulate logical and objective solutions; supervise and provide direction for the installation, maintenance and repair of a variety of complex electronic equipment or related assignments.

ELECTRONICS TECHNICIAN III

EDUCATION AND EXPERIENCE: Associate's degree from an accredited college, university, or technical school in electronics or closely related field and two years of experience performing work involving the installation, maintenance, calibration, repair, and modification of a variety of electrical and computerized equipment; **OR** graduation from high school or equivalent education and three years of experience as described above; **OR** one year of experience as an Electronics Technician II in Nevada State service; **OR** an equivalent combination of education and experience as described above. (*See Special Requirements and Information Notes*)

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):

General knowledge of: technological advances in modern electronic equipment and systems. **Skill in:** troubleshooting and repairing fire alarm panels and systems and electro/mechanical locks and gates. **Ability to:** perform fire alarm testing and/or training as required; organize and coordinate the work activities of others; provide technical guidance to staff to include training, work assignment and review, and providing input regarding performance; prepare documentation related to work performed; *and all knowledge, skills, and abilities required at the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):

(These are identical to the Entry Level Knowledge, Skills, and Abilities required for Electronics Technician IV).

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MINIMUM QUALIFICATIONS (cont'd)

ELECTRONICS TECHNICIAN II

EDUCATION AND EXPERIENCE: Associate's degree from an accredited college, university, or technical school in electronics or closely related field and one year of experience performing work involving the installation, maintenance, calibration, repair and modification of a variety of electrical and computerized equipment; **OR** graduation from high school or equivalent education and two years of experience as described above; **OR** one year of experience as an Electronics Technician I in Nevada State service; **OR** an equivalent combination of education and experience as described above. (*See Special Requirements and Informational Notes*)

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):

Working knowledge of: multiplexing, modulation, modem operation, and analog and digital transmission principles; power supplies and filtering systems; soldering and de-soldering techniques utilizing various types of soldering irons, fluxes, solder, and solvents; connector assembly methods and fabrication. **General knowledge of:** rechargeable battery maintenance. **Ability to:** read and interpret equipment service manuals, technical references and blueprints; troubleshoot and repair electronic equipment down to component level; organize material, information and resources in a systematic way to optimize efficiency and minimize duplication of effort; establish rapport with system users and service vendors; accurately convey equipment problems to agency staff and service vendors regarding warranties and repairs; establish and maintain alpha/numeric files for budgets, vendor accounts, technical reference and inventory control; prepare maintenance and repair logs; work independently and follow through on assignments; prioritize assignments to complete work in a timely manner; maintain an appropriate stock of inventory parts and supplies; determine the most cost effective and efficient method for the repair or replacement of equipment and parts; write grammatically correct business correspondence and reports; *and all knowledge, skills, and abilities required at the lower level.*

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):

(These are identical to the Entry Level Knowledge, Skills, and Abilities required for Electronics Technician III.)

ELECTRONICS TECHNICIAN I

EDUCATION AND EXPERIENCE: Associate's degree from an accredited college, university, or technical school in electronics or closely related field; **OR** graduation from high school or equivalent education and one year of experience performing work involving the installation, maintenance, calibration, repair, and modification of a variety of electrical and computerized equipment; **OR** an equivalent combination of education and experience as described above. (*See Special Requirements and Informational Notes*)

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):

Working knowledge of: electronic theory, principles, and practices to include AC/DC, solid state, integrated circuits, microprocessor devices, conventional symbols, and sources of information; electronic components, color codes and power ratings; safety procedures necessary when working with sensitive electronics, high voltage and hazardous materials. **General knowledge of:** multiplexing, modulation, modem operation, and analog and digital transmission principles; power supplies and filtering systems; microprocessor and computer usage. **Ability to:** add, subtract, multiply and divide whole numbers, fractions, and decimals; solder and remove electronic components from printed circuit boards to repair and modify electronic equipment; utilize a variety of electronic test equipment and tools such as oscilloscopes, multimeters, and signal generators; read and interpret mechanical and electrical drawings and schematics for associated electronic equipment; operate common hand and power tools; work as part of a team; work effectively with frequent interruptions often changing from one task to another; install cards and perform basic personal computer configuration; interact with the public and users.

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MINIMUM QUALIFICATIONS (cont'd)

ELECTRONICS TECHNICIAN I (cont'd)

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills, and Abilities required for Electronics Technician II.)

This class specification is used for classification, recruitment, and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

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REVISED:			11/16/72	
REVISED:			7/1/91P	
			11/29/90PC	
REVISED			7/1/93P	
			8/31/92PC	
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