



New Mexico State Personnel Office

2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

ELECTRONICS SPECIALIST

<u>Class Title</u>	<u>Class Code</u>	<u>Pay Band</u>	<u>Alt Pay Band*</u>
Electronics Specialist - B	E2072B	65	
Electronics Specialist - O	E2072O	70	
Electronics Specialist - A	E2072A	75	

**In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.*

Occupation Description

Research, design, develop and test electronic components and systems for commercial, industrial, military or scientific use utilizing knowledge of electronic theory and materials properties. Design electronic circuits and components for use in fields such as telecommunications, aerospace guidance and propulsion control, acoustics or instruments and controls.

Nature of Work

Electronics Specialists are responsible for a wide range of technologies, from portable music players to global positioning systems (GPS), which can continuously provide the location of, for example, a vehicle. Electronics Specialists design, develop, test, and supervise the manufacture of electronic equipment such as broadcast and communications systems. Many Electronics Specialists also work in areas closely related to computers. However, engineers whose work is related exclusively to computer hardware are considered computer hardware engineers. Electronics Specialists specialize in areas such as communications, signal processing, and control systems or have a specialty within one of these areas control systems or aviation electronics, for example.

Distinguishing Characteristics of Levels

Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic

- Employees in this Role are responsible for performing standardized design or redesign of electronic systems.

Recommended Education and Experience for Full Performance

Bachelor's degree in Electrical or Mechanical Engineering or Computer Science and four (4) years of experience in the design, construction and maintenance of electrical systems or building and repair of scientific instrumentation.

ELECTRONICS SPECIALIST

Minimum Qualifications

Bachelor's degree in Electrical or Mechanical Engineering or Computer Science and two (2) years of experience in the design, construction and maintenance of electrical systems or building and repair of scientific instrumentation. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Operational

- Employees in this Role independently design, research, fabricate, install, document, calibrate and maintain electronic equipment and devices, and correct malfunctions.

Recommended Education and Experience for Full Performance*

Bachelor's degree in Electrical or Mechanical Engineering or Computer Science and six (6) years of experience in the design, construction and maintenance of electrical systems or building and repair of scientific instrumentation.

Minimum Qualifications

Bachelor's degree in Electrical or Mechanical Engineering or Computer Science and four (4) years of experience in the design, construction and maintenance of electrical systems or building and repair of scientific instrumentation. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling eight (8) years may substitute for the required education and experience.

Advanced

- Employees in this Role update instruction manuals and schematics for the maintenance of equipment serviced by technical personnel.
- Employees make cost estimates for equipment fabrication, repair and installation projects, modify existing systems for continued operation, and interface existing systems with newly designed systems.

Recommended Education and Experience for Full Performance

Bachelor's degree in Electrical or Mechanical Engineering or Computer Science and eight (8) years of experience in the design, construction and maintenance of electrical systems or building and repair of scientific instrumentation.

Minimum Qualifications

Bachelor's degree in Electrical or Mechanical Engineering or Computer Science and five (5) years of experience in the design, construction and maintenance of electrical systems or building and repair of scientific instrumentation. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling nine (9) years may substitute for the required education and experience.

Knowledge and Skills

*Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET™ is a trademark of the U.S. Department of Labor, Employment and Training Administration.*

Knowledge

Engineering and Technology — Knowledge of the practical application of engineering science

ELECTRONICS SPECIALIST

and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Skills

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations

ELECTRONICS SPECIALIST

to make improvements or take corrective action.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Statutory Requirements: N/A

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions, and the recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001 **Revised:** 9/20/2011

**Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.*

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.