COMPUTER ELECTRONIC TECHNICIAN

FC: MA700
PG: MW-III
FLSA: Non-Exempt

PC: 321
BU: 01 (SEIU)
Created: May 1989
Revised: 2004

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Under general supervision, performs installation, modification, preventive and corrective maintenance as well as primary and secondary repair ~~of~~ on a wide variety personal computers, mainframe computers and related peripheral devices; maintains records of work performed; and performs related ~~work~~ duties as assigned.

CLASS CHARACTERISTICS

This is the journey level classification performing skilled preventive and corrective maintenance, installation, modification, primary and secondary repair, and operation of a variety of personal computers, mainframe computers and related peripheral devices. Such systems are, but not limited to, integrated control system, data acquisition, sequential occupancy and release system and destination sign system. Peripheral equipment such as printers, ~~,~~ data input and display devices, tape drives, CD devices are within the scope of this position . Incumbents work independently according to accepted standards of the trade~~,~~ under supervisory direction and District procedures and practices. Incumbents are expected to select appropriate tools, materials and approach to the work. This class is distinguished from other electronic technician classes in that the duties relate specifically to the maintenance and repair of personal computers, mainframe computers and related peripheral devices.

REPORTS TO

This position reports to the shift Section Manager, Systems Maintenance.

EXAMPLES OF DUTIES – *Duties may include, but are not limited to, the following:*

1. Installs, repairs, modifies, operates and maintains a variety of PC and mainframe computers including peripheral devices. Typical system components are central processing units, disk drives, tape drives, memory and input devices.
2. Removes and replaces discrete components such as diodes, transistors, integrated circuit chips, capacitors, or any other electronic components.

3. Installs, modifies and repairs wiring, ~~,~~ pins, fans, motors, switches and other related

    electrical assemblies and components~~,~~ found in personal computers, mainframe computers and peripheral devices.

4. Troubleshoots, tests and diagnoses both hardware and software equipment problems using computerized diagnostic tools, oscilloscopes, voltage, ohm and amperage meters, pressure gauges, magnetic field testers, calipers, multi-meters, signal and tone generators, test cards and related devices used in the maintenance and repair of personal computers, mainframe computers and peripheral devices.

5. Performs preventive maintenance to computer and ancillary equipment, including cleaning, lubricating, checking and adjusting all parts and components.

6. Loads and runs software diagnostic programs; monitors computer while in operations; assesses equipment problems and determines appropriate repairs.

7. Performs various operations, start-up shut down, on line diagnostic testing, data retrieval and report generation; system saves/restores, loads various system applications on centrally and remotely located systems; coordinates with Central Operations to test system indications, controls, and alarm functions of on line systems.

8. Reads work requests and discusses equipment problems and work to be performed with supervisors, lead foreworkers, supervisors, work request initiators and equipment users.

9 Reads and interprets manuals, diagrams, procedures, specifications, schematics and drawings.

10. Obtains required stock tools, parts and equipment to perform duties.
11. Determines appropriate substitutions for parts and components no longer in production; performs calculations for component replacement.

12. Constructs special assemblies, such as circuit boards, components, wiring, harnesses and connector panels,
13. Provides various assistance to engineering and operations personnel; coordinates with maintenance technicians from other areas on jointly maintained or interlinked system maintenance.

14. Responds to computerized, telephone, and in-person requests for computer maintenance.

15. Maintains records of work performed, time required, parts and materials used, component serial numbers and related data, using current District maintenance management software and other PC applications such as, excel, lotus notes, word, etc.

16. Confirms that simple work orders and safe clearances have been provided where necessary, and uses appropriate safety apparel and devices.

17. Update drawings to reflect field conditions.

18. Prepares brief reports of repeated maintenance problems.

19. Operates District vehicles to reach equipment to be serviced and may include high-railed vehicles used on tracks; may operate cranes or other equipment as required for repair.

QUALIFICATIONS

Knowledge of:

Methods, materials, tools and equipment used in the repair, installation, modification and maintenance of personal and mainframe computers, mainframe computers and peripheral devices.

Analog/digital electronics and electrical circuitry.

Various electronic display systems such as projection, CRT, LCD, and LED.

Basic principles of computer operations, network theory, operating systems such as Windows XX, Unix, Linux, and database principles and script languages.

Techniques used in troubleshooting computer and electronic equipment, including diagnostic software.

Current District PC applications such as excel, lotus notes, word, etc.

Use and care of hand and power testing and repair tools and equipment common to the trade.

Mathematics used in computer maintenance, including Boolean algebra.

Safety practices as applied to computer maintenance.

Skill in:

Installing, repairing, maintaining, troubleshooting and modifying personal and mainframe computers and peripheral devices.

Differentiating between hardware and software problems.

Diagnosing and troubleshooting operational problems.

Using and caring for hand and power tools and equipment used in computer testing and repair.

Reading and interpreting manuals, procedures, diagrams, schematics and configuration equations.

Performing calculations required for computer repair and maintenance.

Keeping accurate records of work performed and parts and materials used.

Using current PC applications systems.

Establishing and maintaining effective working relationships with those contacted in the course of the work.

Operating the District's radio and telephone communication systems incompliance with District Rules, Regulations and Procedures.

MINIMUM QUALIFICATIONS

Education:

An Associate degree in electronics from an accredited college, or a Certificate of Achievement in Electronics from an accredited college, or completion of military training in electronics, or completion of a formal apprenticeship as an electronic technician and possession of a high school diploma, GED, or recognized equivalent.

Experience:

One (1) year of (full-time equivalent) verifiable journey level experience in the maintenance and repair of personal computers, mainframe computers and peripheral devices in an environment that includes a computer network, operating systems such as Windows XX, Unix, Linux, relational database and script languages. Experience with computer electronic and electro-mechanical components within a primary repair setting is desirable.

Other Requirements:

Must possess a valid California driver's license and have a satisfactory driving record.

Must be physically able to lift to waist level and carry up to ~~50~~ 60 pounds.

Must be physically able to climb, stoop, bend, kneel and crawl to reach work.

Must be physically able to walk on uneven surfaces for long distances.

Must be physically able to work in confined spaces, underground and on aerial structures.
Must be willing to work in exposure to live voltage
Must be able to understand, read and communicate in English.
Must be able to work various shifts, weekends, holidays, and overtime.

Substitution:

In addition to the experience listed above, four (4) years of (full-time equivalent) verifiable electronic maintenance experience (i.e. maintaining, troubleshooting and repairing electronic and/or electro-mechanical equipment) can be substituted for the education.

WORKING CONDITIONS

Environmental Conditions:

Office environment; exposure to electronic equipment, ancillary equipment and devices.
shop environment; exposure to live voltage, air contamination, heat, and cold; field environment; exposure to live voltage, uneven surfaces, confined spaces, underground, aerial structures, and inclement weather.

Physical Conditions:

Requires maintaining physical condition necessary for lifting and carrying; climbing, stooping, bending, kneeling, crawling, walking, standing or sitting for prolonged periods of time.