

ELECTRONICS SPECIALIST

DEFINITION

Under direction, performs advanced and highly skilled technical work pertaining to the assembly, maintenance and repair of complex electronic and media equipment; diagnoses and corrects intricate and complex malfunctions of electronic equipment by testing and repairing circuits, solder joints, connectors, fuses, capacitors, transformers, wiring and other component elements; checks belts, gears, drives, heat sinks and motors; determines whether repairs are possible and cost effective; assists with other equipment maintenance and repair pertaining to computer, network and telecommunications systems; works with vendors and other resources to resolve malfunctions and obtain parts; and performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is a highly specialized technical class within the Yosemite Community College District (YCCD). An incumbent in this class performs a wide range of specialized diagnostic and repair duties related to electronics and related equipment. Incumbents utilize specialized technical knowledge pertaining to electronics theory and practice in order to make decisions and complete assignments. An incumbent may also assist with general multimedia and computer installations, upgrades, maintenance and repairs.

SUPERVISION RECEIVED AND EXERCISED

An incumbent in this class works under the direction of a manager or senior manager, receiving occasional supervision while working toward a definite objective that requires use of a wide range of procedures. An incumbent plans and/or determines specific procedures or equipment required to meet assigned objectives and solve non-routine problems, referring only unusual matters to a supervisor.

An incumbent in this class does not directly lead or supervise other full-time employees, but may assign, direct and/or monitor the work of subordinate full time, part time, and/or student employees on a project or assignment basis.

EXAMPLES OF DUTIES *(Illustrative Only)*

- Performs highly skilled and specialized troubleshooting for electronics equipment such as televisions, audio and video recording/playback equipment, DVD's, projectors, microphones and amplifiers; evaluates intricate internal components and elements such as chips, circuits, solder joints, connectors, fuses, capacitors, transformers, wiring, belts, gears, drives, heat sinks and motors; checks power sources and stability using scopes, meters and other diagnostic tools; reads and interprets electronic schematics.
- Cleans equipment and components; repairs or replaces failed components as needed; works with vendors and other technical resources to identify and obtain replacement parts and components.
- Utilizes a variety of specialized electronic testing and repair equipment in aligning, adjusting and repairing electronic equipment; fabricates parts or tools as needed.

- Installs and maintains a wide variety of electronic equipment and systems such as public address systems, color and monochrome video systems, noise masking systems, visual projection, electronic light dimming systems, clock and fire alarm systems. assists with the installation and maintenance of telecommunications systems.
- Maintains files and records of operating instructions, parts lists, schematic drawings and service records for electronic equipment; orders and maintains an appropriate inventory of spare parts and supplies.
- Assists with repairs and troubleshooting of computer, peripheral and network system hardware and software; helps monitor and maintain the function of networked components including routers, hubs, bridges and switches; recommends actions to overcome result deviations.
- Assists information technology staff in the evaluation, selection, acquisition and implementation of computer hardware and software solutions; assists in determining requirements for new equipment installation.
- Participates in the planning, development and preparation of technical standards, operational procedures and system performance objectives for assigned areas.
- Explains and demonstrates the use of new electronic and other equipment; responds to questions regarding system purposes, workflow issues and output needs; recommends procedures and helps develop user instructions concerning the use of specialized equipment.
- Assists with large-scale implementation of new technology processes, upgrades and equipment rollouts; troubleshoots conversion and implementation problems.
- Develops alternative solutions to end user problems.
- Performs technical administrative duties; attends meetings; serves on committees and task forces; independently responds to various inquiries and correspondence; prepares information and data requested for administrative review; maintains information system documentation; prepares reports, files, correspondence and other documents.
- Performs other related duties as assigned.

TYPICAL WORKING CONDITIONS

- Work is generally performed in an indoor office environment that includes frequent exposure to computer screens.

MINIMUM QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The knowledge and ability requirements are representative of essential duties. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions of the position.

Knowledge of:

- Electrical and electronic theory and practices.
- Tools, materials and equipment used in the repair and maintenance of electronic equipment.
- Soldering and de-soldering techniques.

- Proper procedures for the repair, overhaul and maintenance of a variety of electronic and electro-mechanical equipment.
- Safety precautions to be observed in the maintenance of electrical equipment.
- Trends in electronic technology.
- Electronic technology documentation and data communication standards.
- Computer systems and related peripheral equipment.
- Standard computer operating systems and a variety of computer hardware and software applications.
- English usage, spelling, grammar, punctuation and arithmetical processes.

Ability to:

- Perform skilled work in the diagnosis, repair, maintenance and adjustment of electronic and electro-mechanical equipment.
- Use precision tools skillfully and effectively to perform exacting work in the repair and overhaul of multimedia and other equipment.
- Operate electronic measuring instruments.
- Read blueprints, schematics and other types of technical drawings.
- Interpret and apply manufacturer's specifications related to utilizing a part, product or system.
- Maintain records.
- Respond to user questions and customer service needs.
- Perform arithmetical calculations with speed and accuracy.
- Understand and carry out oral and written directions.
- Communicate effectively, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of the work.

Licenses and Certificates:

- Depending upon assignment, a valid license to drive in California may be required.

Physical and Mental Standards:

- **Mobility:** ability to sit for long periods, move about an office, stand occasionally, reach above and below desk level.
- **Dexterity:** sufficient for fine manipulation of tools and intricate electronic equipment, operation of a computer keyboard, handling of individual papers, and writing and taking notes.
- **Lifting:** frequent lifting of papers, files, equipment and material weighing up to 25 pounds.
- **Visual Requirements:** close vision sufficient to read files, documents, and computer screens and do close-up work; ability to adjust focus frequently.
- **Hearing/Talking:** ability to hear normal speech, speak and hear on the telephone, and speak in person; ability to hear faint equipment noises.
- **Emotional/Psychological Factors:** ability to make decisions and concentrate; frequent contact with others including some public contact; frequent deadlines and time-limited assignments.

Education and Experience:

Any combination of education, experience and/or training that would likely provide the above-required knowledge, skills and abilities is qualifying. Typical background patterns that would provide the knowledge, skills and abilities are:

- Education: Possession of an associate's degree from an accredited college or university, with major course work in electronic technology or a closely related field. Completion of an acceptable trade school course in electronics may also be acceptable.
- Experience: Two years performing journey-level diagnostics, maintenance and repair on a wide range of electronic equipment including televisions, audio and video recording/playback equipment, DVD's, projectors, microphones, amplifiers, computers and peripherals.
- Substitution: Additional qualifying experience may substitute for the above education on a year-for-year basis.

Special Requirements:

- None

Class Adopted: 3/1/09

Class Amended: XX-XX-XX