

# Classification and Qualification



# STANDARDS

The California State University System

## Equipment Technician Series

### EQUIPMENT TECHNICIAN I

Class Title	Class Code	Date Estab.	Occup. Index Ref.
Equipment Technician I, Mechanical	7001	7-1-80	P-1
Supervising Equipment Technician I, Mechanical	7031	7-1-80	P-1
Equipment Technician I, Electro-Mechanical	7002	7-1-80	P-1
Supervising Equipment Technician I, Electro-Mechanical	7032	7-1-80	P-1
Equipment Technician I, Electronic	7003	7-1-80	P-1
Supervising Equipment Technician I, Electronic	7033	7-1-80	P-1
Equipment Technician I, Specialized Equipment	7004	7-1-80	P-1
Supervising Equipment Technician I, Specialized Equipment	7034	7-1-80	P-1

### DEFINITION:

Under general supervision, incumbents at the Equipment Technician I level perform skilled repair, maintenance, assembly, and installation of a variety of instructional support equipment within a specialty area. Positions are established in particular classes appropriate to the kind of equipment for which specialized knowledges and abilities are required. Duties at this level may include major overhaul of equipment, and occasionally performing or assisting higher level technicians in modification, fabrication, and/or construction of equipment.

Incumbents may also be responsible for the ordering of parts and supplies and for keeping stock records of equipment and supply items.

Incumbents at the Supervising Equipment Technician I level regardless of specialty perform technical equipment repair, maintenance, and overhaul *and* plan and organize the work of others and are directly responsible for assignment of work, work performance, training and evaluation; supervision may involve supervision of instructional support assistants. Incumbents may work in a lead capacity over Instructional Support Technician I.

Specialties relate to the type of equipment being maintained: Mechanical, Electro-Mechanical, Electronic, and Specialized Equipment.

### DISTINGUISHING CHARACTERISTICS:

Incumbents of positions in this class perform skilled repair and maintenance of equipment using standard equipment repair knowledges, skills, tools, methods and techniques for common kinds of equipment of a specialized type using manufacturers' schematics and manuals for factory-built equipment. Some assignments involve assembly, installation of equipment or making simple modifications. Troubleshooting involves standard practices for skilled technicians.

Incumbents of positions who perform equipment repair, maintenance, installation, design, or fabrication 50% or more of the time should be allocated to this series. Some assignments involve performing additional services related to materials, supplies, and other instructional support.

Incumbents of positions who perform equipment repair, maintenance, installation, design, or fabrication less than 50% of the time and in combination with other instructional support should be allocated to the Instructional Support Series.

### **Examples of Typical Activities:**

#### **For Equipment Technician I and Supervising Equipment Technician I, all specialties**

Positions in all specialties use various testing meters and devices and parts; occasionally modify, construct or fabricate equipment; issue and store equipment; requisition and maintain inventory of spare and replacement parts; maintain records of all equipment repaired and in process of repair; give technical advice relative to equipment, its characteristic and operation, and to the selection and of new equipment.

#### **Mechanical Equipment Specialty**

Incumbents of positions in this specialty maintain and repair mechanical equipment using hand and power tools to repair, replace, lubricate, and adjust parts. Equipment repair includes motors, generators, engines, pumps, and a variety of mechanical devices serviced as bench work or at the equipment location site. Repair involves use of power drills, grinders, and lathes. Incumbents maintain, repair (including major overhaul) and install such equipment as heat and refrigeration equipment, pumps, generators, motors, engines, voltmeters, ammeters, galvanometers, thermo- potentiometers, pressure and vacuum gauges, and balances, centrifuges, mixers, separators, and mechanical devices used for technical instructional programs.

#### **Electro-Mechanical Equipment Specialty**

Incumbents clean, adjust, lubricate, replace worn or defective parts, overhaul, assemble, and install electrical and electro-mechanical devices and equipment; troubleshooting usually follows manufacturers' instructions or standard techniques for electro-mechanical equipment. Incumbents use meters and testing devices to test circuits and locate malfunctions. Incumbents repair and maintain equipment such as record players, projectors, duplicating equipment, public address systems, cameras, language laboratory equipment, radios, computer terminals, computer equipment, and microphones; replace parts and make electro-mechanical repairs in electronic equipment; repair TV sets and cameras using manufacturers' guides, schematics, and instructions.

#### **Electronic Equipment Specialty**

At this level, technicians use basic test instruments to analyze malfunctions and make adjustments; work at this level requires knowledge of equipment operation and knowledge of design characteristics for electronic gear of a similar type.

Incumbents identify defective or malfunctioning parts. Incumbents make repairs and wire circuits following furnished schematics; check electronic characteristics of various circuits, tubes, transistors, amplifiers, filters, oscillators, FETS integrated circuits, etc.; refer to blueprints, specifications and manuals for performance limits; certify accuracy of instruments under test; perform television and computer repair requiring knowledge of electronics.

#### **Specialized Equipment Specialty**

Incumbents of positions in this specialty repair equipment requiring specialized skills, such as those required for repair of common musical instruments or common optical equipment. The techniques and skills required must be those which are sufficiently specialized that incumbents must be hired with appropriate special knowledges and skills because there is no opportunity to learn on the job. Included in this specialty are positions which require craft skills to build or fabricate special equipment.

## MINIMUM QUALIFICATIONS:

### Knowledges and Abilities:

#### **For Equipment Technician I and Supervising Equipment Technician I, all specialties**

General knowledge of the methods, materials, and tools used in the repair, maintenance, and installation of the common types of the specialized equipment in the assigned instructional program(s); general knowledge of testing apparatus.

Ability to use hand tools in repair, analysis, installation, or fabrication of equipment of the specialty to which assigned; ability to analyze equipment problems and determine necessary repairs; ability to follow plans; ability to follow oral and written directions; ability to keep simple work and inventory records; ability to establish and maintain cooperative working relationships with others; ability to read and write at a level appropriate to the duties of the position;; ability to make arithmetic computations where required.

In addition, and as required, incumbents should possess specialized knowledge and ability pertinent to the individual position.

#### **For Supervising Equipment Technician I, all specialties**

The ability to train and supervise others.

and

### Experience:

#### **For Equipment Technician I and Supervising Equipment Technician I**

Equivalent to one year of journey-level or skilled experience in the maintenance, repair and operation of scientific or technical equipment in the specialty area to which assigned such as mechanical, electromechanical, electronics or in the specialized category requiring construction and fabrication skills and some precision work, trade or craft skills working with a variety of unique materials, or specialized knowledge and skill related to unusual equipment.

or

Equivalent to two years of semi-skilled experience maintaining and repairing scientific or technical equipment or related equipment experience as part of instructional support activities may be substituted for the required experience.

or

Equivalent to two years of trade school or technical arts training with specialization in the type of equipment repair to which assigned, completion of an apprenticeship program, or completion of a full military specialization in the required type of equipment maintenance and repair may be substituted for the required experience.

and

### Special Qualifications:

A Federal Communications Commission license is required for some positions.

**Work Week Group:** 1  
**Premium O/T:** Yes  
**Shift Differential:** Yes  
**Employee Category:** Non-Academic