



## **Assistant Telecommunications Engineer**

**Exam Code: 0PB4001**

## **Associate Telecommunications Engineer**

**Exam Code: 0PB4002**

**Department:** State of California

**Exam Type:** Servicewide, Open

**Final Filing Date:** Continuous

### **CLASSIFICATION DETAILS**

**Assistant Telecommunications Engineer** – \$5,586.00 - \$6,787.00 per month.

**Associate Telecommunications Engineer**– \$6,897.00 - \$8,379.00 per month.

View the [classification specification](#) for the Assistant and Associate Telecommunications Engineer classifications.

### **APPLICATION INSTRUCTIONS**

Final Filing Date: Continuous

#### **Who Should Apply:**

Applicants who meet the minimum qualifications as stated on this bulletin may apply for and take this examination.

Once you have taken this examination, you may not retake it for **6 months**.

#### **How To Apply:**

The link to connect to the Training and Experience Evaluation is located farther down on this bulletin in the “Taking the Exam” section.

#### **Special Testing Arrangements:**

If you require special testing arrangements due to a verified disability or medical condition, please contact:

California Department of Human Resources  
CalCareer Service Center  
1810 16<sup>th</sup> Street  
Sacramento, CA 95814

Phone: (866) 844-8671

Email: [CalCareer@CalHR.CA.GOV](mailto:CalCareer@CalHR.CA.GOV)

California Relay Service: 7-1-1 (TTY and voice)

TTY is a Telecommunications Device for the Deaf, and is reachable only from phones equipped with a TTY Device

## **MINIMUM QUALIFICATIONS**

All applicants must meet the education and/or experience requirements as stated on this exam bulletin to be accepted into the examination. Part-time or full-time jobs, regardless of whether paid or volunteer positions, and inside or outside California state service will count toward experience.

### **Assistant Telecommunications Engineer**

#### **Either I:**

One year of experience in the California state service performing the duties of the Junior Electrical Engineer in the telecommunications field.

#### **Or II**

Two years of electrical engineering experience, one year of which shall have been in the telecommunications field.

#### **AND**

Education: Candidates applying under non-State requirement must meet the following education requirements: Equivalent to graduation from college with major work in electrical, electronic, or communications engineering. (Additional qualifying experience may be substituted for the required education on a year-for-year basis.) (A Master's Degree in Electrical Engineering with specialization in electronics or communications may be substituted for the required experience for Assistant Telecommunications Engineer. Applicants, who are pursuing graduate work toward a master's degree will be admitted to the examination, but they must receive the degree before they will be considered for the appointment.

## **Associate Telecommunications Engineer**

### **Either I**

Two years of experience performing the duties of an Assistant Telecommunications Engineer.

### **Or II**

Three years of engineering experience in the field of telecommunications which must have been included two years in design and construction, or maintenance of radio communications systems or wire communications systems.

### **AND**

Education: Candidates applying under non-State requirements must meet the following education requirements: Equivalent to graduation from college with major work in electrical, electronic, or communications engineering. (Additional qualifying experience may be substituted for the required education on a year-for-year basis.) (A Master's Degree in Electrical Engineering with specialization in electronics or communications may be substituted for the required experience for Assistant Telecommunications Engineer. Applicants who are pursuing graduate work toward a master's degree will be admitted to the examination, but they must receive the degree before they will be considered for appointment.)

## **POSITION DESCRIPTION**

### **Assistant Telecommunications Engineer**

This is the lower level of journeyman in this series. Under supervision, incumbents perform engineering work of average difficulty and assist in making telecommunications engineering surveys and studies.

### **Associate Telecommunications Engineer**

This is the full journeyman professional level engineer in the series. Under direction, incumbents perform difficult telecommunications engineering work or act as a leadperson over subordinate staff members in connection with design, installation, maintenance and operation of statewide telecommunications systems; and independently make or supervise telecommunication engineering surveys and studies.

## **EXAMINATION SCOPE**

This examination consists of the following components:

**Training and Experience Evaluation** – Weighted 100% of the final score.

The examination will consist solely of a **Training and Experience Evaluation**. To obtain a position on the eligible list, a minimum score of 70% must be received.

Applicants will receive their score upon completion of the Training and Experience Evaluation process.

In addition to evaluating applicants' relative knowledge, skills, and ability, as demonstrated by quality and breadth of education and/or experience, emphasis in each exam component will be measuring competitively, relative job demands, each applicant's:

**Assistant & Associate Telecommunications Engineer:**

**Knowledge of:**

1. The theory and principles of telecommunications and electronics for the installation, maintenance, modification, and repair of equipment and systems.
2. The design, uses, and functions of telecommunication systems and equipment (e.g., wire line, radio, fiber, satellite, data communications, telephone systems).
3. The principles, practices, methods, terminology and trends in telecommunication systems engineering.
4. The field of electromagnetic wave propagation to effectively design and test telecommunications systems.
5. The mathematical principles used in design and implementation of telecommunication systems.

**Ability to:**

1. Apply the theory and principles of telecommunications and electronics for the installation, maintenance, modification, and repair of equipment and systems.
2. Write clearly and concisely using proper spelling, grammar, syntax and sentence structure.
3. Verbally communicate information and ideas so others will understand.
4. Use computers and network equipment to configure, monitor, test, and/or operate telecommunication systems.
5. Develop and maintain constructive and cooperative working relationships.
6. Write technical reports to communicate complex information to various audiences.
7. Actively listen to others facilitate an open exchange of ideas and provide for effective communication.
8. Apply mathematical principles and statistical analysis to design and evaluate telecommunication systems.

## **Additional Knowledge and Abilities for Associate Telecommunications Engineer:**

### **Knowledge of:**

1. Signal strength measurements and tolerances to effectively design, test, and maintain telecommunications systems.
2. Techniques (e.g., soldering, connectorizing, interpreting schematic diagrams) used in the installation and modification of telecommunications equipment and systems down to the component level.
3. Statistical analysis techniques in order to interpret data and make recommendations.

### **Ability to:**

1. Detect, eliminate, and prevent problems with telecommunication systems down to the component level to ensure operability of equipment.
2. Detect, eliminate, and prevent sources of radio frequency interference using test equipment on radio frequency interference using test equipment on radio, microwave, and communications systems to assure proper operation.
3. Interpret and apply provisions of State and federal rules and regulations affecting the design, implementation, and operation of telecommunications systems.
4. Modify and assemble telecommunications equipment to properly interface with communications systems in accordance with manufacturer specifications and engineering instructions.
5. Effectively communicate in front of groups to facilitate an open exchange of ideas.

## **ELIGIBLE LIST INFORMATION**

A servicewide, open eligible list for the **Assistant and Associate Telecommunications Engineer** classifications will be established for:

State of California (all State of California departments, statewide)

The names of successful competitors will be merged onto the eligible list in order of final score regardless of exam date. Eligibility expires **12 months** after it is established. Applicants must then retake the examination to reestablish eligibility.

Veterans' Preference will be granted for this examination. In accordance with Government Codes 18973.1 and 18973.5, whenever any veteran, or widow or widower of a veteran achieves a passing score on an open examination, he or she shall be ranked in the top rank of the resulting eligible list.

Veterans status is verified by the California Department of Human Resources (CalHR). Information on this program and the Veterans' Preference Application (Std. 1093) is available [online](#). Additional information on veteran benefits is available at the Department of Veterans Affairs.

**Career credits will not be added to the final score of this examination.**

## **EXAMINATION INFORMATION**

[Preview Training and Experience Evaluation](#) for the Assistant and Associate Telecommunications Engineer classifications.

## **PREPARING FOR THE EXAMINATION**

Here is a list of suggested resources to have available prior to taking the exam.

**Employment History:** Employment dates, job titles, organization names and addresses, names of supervisors or persons who can verify your job responsibilities, and phone numbers of persons listed above.

**Education:** School names and addresses, degrees earned, dates attended, courses taken (verifiable on a transcript), persons or office who can verify education, and phone numbers of persons or offices listed above.

**Training:** Class titles, certifications received, names of persons who can verify your training, and phone numbers of persons listed above.

## **TAKING THE EXAMINATION**

Take the examination for the [Assistant Telecommunications Engineer and Associate Telecommunication Engineer](#) classifications.

## **TESTING DEPARTMENTS**

State of California (all State of California departments)

## **CONTACT INFORMATION**

California Department of Human Resources  
CalCareer Service Center  
1810 16<sup>th</sup> Street  
Sacramento, CA 95814  
Phone: (866) 844-8671  
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## **EQUAL OPPORTUNITY EMPLOYER**

The State of California is an equal opportunity employer to all, regardless of age, ancestry, color, disability (mental and physical), exercising the right of family care and

medical leave, gender, gender expression, gender identity, genetic information, marital status, medical condition, military or veteran status, national origin, political affiliation, race, religious creed, sex (includes pregnancy, childbirth, breastfeeding, and related medical conditions), and sexual orientation.

## **DRUG-FREE STATEMENT**

It is an objective of the State of California to achieve a drug-free State work place. Any applicant for State employment will be expected to behave in accordance with this objective, because the use of illegal drugs is inconsistent with the law of the State, the rules governing civil service, and the special trust placed in public servants.

## **GENERAL INFORMATION**

Examination and/or Employment Application (STD 678) forms are available at the California Department of Human Resources, local offices of the Employment Development Department, and through your [CalCareer Account](#).

If you meet the requirements stated on this examination bulletin, you may take this examination, which is competitive. Possession of the entrance requirements does not assure a place on the eligible list. Your performance in the examination described in this bulletin will be rated against a predetermined job-related rating, and all applicants who pass will be ranked according to their score.

The California Department of Human Resources (CalHR) reserves the right to revise the examination plan to better meet the needs of the service, if the circumstances under which this examination was planned change. Such revision will be in accordance with civil service laws and rules and all applicants will be notified.

**General Qualifications:** Applicants must possess essential personal qualifications including integrity, initiative, dependability, good judgement, the ability to work cooperatively with others, and a state of health consistent with the ability to perform the assigned duties of the class. A medical examination may be required. In open examinations, investigation may be made of employment records and personal history and fingerprinting may be required.

**Eligible Lists:** Eligible lists established by competitive examination, regardless of date, must be used in the following order: 1) sub-divisional promotional, 2) departmental promotional, 3) multi-departmental promotional, 4) servicewide promotional, 5) departmental open, 6) open. When there are two lists of the same kind, the older must be used first. Eligible lists will expire in one to four years unless otherwise stated on the bulletin.

**High School Equivalence:** Equivalence to completion of the 12<sup>th</sup> grade may be demonstrated in any one of the following ways: 1) passing the General Education

Development (GED) Test; 2) completion of 12 semester units of college-level work; 3) certification from the State Department of Education, a local school board, or high school authorities that the competitor is considered to have education equivalent to graduation from high school; or 4) for clerical and accounting classes, substitution of business college work in place of high school on a year-for-year basis.