



# Mechanical Engineer

Class Code: 3583 – Exam Code: 7PB03

Department: Department of General Services  
Opening Date: 8/18/17  
Final Filing Date: Continuous  
Type of Examination: Departmental Open  
Salary: \$5,098.00 - \$9,548.00

## EQUAL EMPLOYMENT OPPORTUNITY

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.

## WHO SHOULD APPLY?

Applicants who meet the Minimum Qualifications as stated on this bulletin may apply for and take this Training and Experience Evaluation at any time.

Once you have taken the Training and Experience Evaluation, you may not retake it for six (6) months.

## SPECIAL TESTING ARRANGEMENTS

If you require special testing arrangements due to a verified disability, medical condition, or religious accommodation, please contact us.

If you have any questions, please contact the:

California Department of Human Resources  
CalCareer Services at 1-866-844-8671  
OR

California Relay Service at 7-1-1  
Telecommunications Device for the Deaf (TTY) at (916) 654-6336\*

\* TTY is a telecommunications device that is reachable only from telephones equipped with a TTY device.

## ELIGIBLE LIST INFORMATION

An open, merged eligible list will be established by the California Department of Human Resources for use by the Department of General Services. The names of successful competitors will be merged onto the eligible list in order of final score regardless of test date. Eligibility expires twelve (12) months after it is established. Competitors must then retake the Training and Experience Evaluation to reestablish eligibility.

## REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION

**NOTE:** All applicants must meet the education and/or experience requirements as stated on this examination bulletin as of the date the test is taken.

## MINIMUM QUALIFICATIONS

Education: Graduation from a curriculum in mechanical engineering accredited by the Engineers' Council for Professional Development, or equivalent qualifications. (Registration as a Senior in such a curriculum will admit applicants to the examination, but they must produce evidence of graduation before they will be considered eligible for appointment.)

Or

Possession of equivalent qualifications may be demonstrated by qualifying in a written examination covering basic mechanical engineering and by graduation from an engineering curriculum which includes the engineering courses normally included in a standard four-year course in mechanical, chemical, or industrial engineering. (Registration as a Senior in such a curriculum will admit applicants to the qualifying written examination, but they must produce evidence of graduation before they will be considered to meet the minimum qualifications.)

## POSITION DESCRIPTION

Mechanical Engineers perform mechanical engineering work in the design, plans, and specifications for mechanical systems in dams, electrical power and pumping plants, substations, radio stations, highways, tunnels, bridges, and institutional and office buildings; prepare designs, detailed drawings, and specifications for mechanical systems such as heating, ventilating, air-conditioning, refrigeration, plumbing, water supply and water purification systems, sanitary and drainage systems, and steam generating plants; check working drawings; prepare material lists and purchase requisitions; make detailed field inspections of material, equipment, and construction operations; make or supervise the installation, repair, or recommend improvements of mechanical equipment or systems; lead the work and review the reports of lower-level engineers; and prepare correspondence and reports.

## EXAMINATION INFORMATION

### TRAINING AND EXPERIENCE EVALUATION – Weighted 100%

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. An applicant will receive his/her score upon completion of the Training and Experience Evaluation process.

To preview the Mechanical Engineer Training and Experience Evaluation, select [Mechanical Engineer preview examination](#).

## KNOWLEDGE AND ABILITIES

### Knowledge of:

Engineering fundamentals and mathematics; designing and preparing plans, layout,

specification writing, and estimates for heating, ventilating, instrumentation, pumping, lubrication, piping, air conditioning, refrigeration, plumbing, sanitary, pressure tank, water, water purification and drainage systems, and steam generating plants in common use, including principles of fluid flow, heat transfer, mechanical methods of power and material transmission, thermodynamics, and hydraulics pertaining to the design of water systems, pressure tanks, pumps, sewer systems, and other similar installations; various codes, safety orders, and regulations governing the design and installation of mechanical equipment, including electric motors; procedures of building construction as it relates to the installation of mechanical equipment; principles of leading the work of others.

**Ability to:**

Prepare plans, specifications, and estimates for heating, ventilating, air-conditioning, refrigeration, plumbing, sanitary, water, water purification and drainage systems, and steam generating plants in common use; do mechanical design work; make correct computations; make neat and accurate lettering, drawings, and technical sketches; specify proper equipment materials; accurately interpret drawings and specifications; determine required sizes for radiators, traps, pipes, and other units; direct or inspect field construction operations or make field inspections and tests of mechanical installations; lead the work of others; check drawings and specifications; establish and maintain cooperative relations with employees and with those contacted in the work and whose work is being inspected; analyze situations accurately, and adopt and take effective action; prepare correspondence and make effective oral and written reports.

**VETERANS' PREFERENCE**

Veterans' Preference will be granted for this examination. Effective January 1, 2014, in accordance with Government Codes 18973.1 and 18973.5, whenever any veteran, widow or widower of a veteran, or spouse of a 100 percent-disabled veteran achieves a passing score on an open examination, he or she shall be ranked in the top rank of the resulting eligibility list. This section shall not apply to any veteran who has been dishonorably discharged or released.

**CAREER CREDITS**

Career Credits will not be applied to the final score of competitors who are successful in this examination.

**CONTACT INFORMATION**

If you have any questions concerning this announcement, please contact:

The California Department of Human Resources, Selections Division  
1810 16<sup>th</sup> Street  
Sacramento, CA 95811-7258  
1-866-844-8671

California Relay Service: (7-1-1)

Telecommunications Device for the Deaf (TTY) (916) 654-6336

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**GENERAL INFORMATION**

**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 on this bulletin will be

rated against a predetermined job-related rating, and all candidates who pass will be ranked according to their scores.

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

**Candidates needing special testing arrangements** due to a disability must mark the appropriate box on the application and contact the testing department.

**Hiring Interview Scope:** In a hiring interview, in addition to the scope described in this bulletin, the panel will consider education, experience, personal development, personal traits, and fitness. In appraising experience, more weight may be given to the breadth and recency of pertinent experience, and evidence of the candidate's ability to accept and fulfill increasing responsibilities than to the length of his/her experience. Evaluation of a candidate's personal development will include consideration of his/her recognition of his/her own training needs; his/her plans for self-development; and the progress he/she has made in his/her efforts toward self-development. For more information, you may refer to the [Mechanical Engineer classification specification](#).

**General Qualifications:** Candidates must possess essential personal qualifications including integrity, initiative, dependability, good judgment, 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) service-wide promotional, 5) departmental open, and 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.

**Veterans' Preference:** Effective January 1, 2014, in accordance with Government Codes 18973.1 and 18973.5, Veterans' Preference will be awarded as follows: 1) Any veteran, widow or widower of a veteran, or spouse of a 100 percent disabled veteran, who achieves a passing score in an entrance examination, shall be ranked in the top rank of the resulting eligibility list. Any veteran who has been dishonorably discharged or released is not eligible for Veterans' Preference. 2) An entrance examination is defined, under the law, as any open competitive examination. And 3) Veterans' Preference is not granted once a person achieves permanent civil service status.

Veteran status is verified by the California Department of Human Resources (CalHR). Directions to apply for Veterans' Preference are on the Veterans' Preference Application (Std. Form 1093), which is available at [CalHR's Veterans' Information webpage](#), and the Department of Veterans Affairs.

**Bulletin Revision date: 8/17/17**

Click the link below to be directed to the Training and Experience Evaluation. Upon completion of the Training and Experience Evaluation, it will be instantly scored.

**\*Please remember to print a copy of your exam results for your records. It may take up to 5 business days for eligibility records to appear in your CalCareer profile.**

Select [Mechanical Engineer Training and Experience Evaluation](#) to access this online examination.

#### **SUGGESTED RESOURCES TO HAVE AVAILABLE WHEN BEGINNING EVALUATION**

**Employment History:** Job Titles, organization name and addresses, name of supervisors or persons who can verify your job responsibilities, and phone numbers of listed persons.

**Education History:** Names of college courses that are relevant to the tasks listed in the evaluation.