RESEARCH SCIENTIST I (VARIOUS SPECIALTIES)

Schematic Code / Classification Code / Classification Specialty / Exam Code

LR01 / 5576 / (CHEMICAL SCIENCES) / 2H1AB
LR02 / 5577 / (EPIDEMIOLOGY/BIOSTATISTICS) / 2H1AC
LR03 / 5578 / (MICROBIOLOGICAL SCIENCES) / 2H1AD
LR04 / 5579 / (PHYSICAL/ENGINEERING SCIENCES) 2H1AE
LR05 / 5580 / (SOCIAL / BEHAVIORAL SCIENCES) / 2H1AF

Examination Type: Open

Continuous FINAL FILING DATES
Testing is considered continuous as dates can be set at any time. Applications will be reviewed to ensure the minimum requirements for participation in this exam are met. Possession of the entrance requirements does not assure a place on the eligible list. Once you have taken the examination, you may not retest for 12 months from the established list date.

Applications must be submitted by the filing dates indicated below. Applications postmarked, personally delivered, or received via interoffice mail after the final filing date, will be held for the next administration of the exam. The filing dates are:

JANUARY 5, 2017
MARCH 6, 2017
MAY 5, 2017
JULY 5, 2017
SEPTEMBER 5, 2017
NOVEMBER 6, 2017
JANUARY 5, 2018
**SALARY**

$5488-6820 per month

**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 to 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.

**WHO CAN APPLY**

Persons who meet the minimum qualifications (entrance requirements) as stated on this announcement may take this examination, which is competitive.

**MINIMUM QUALIFICATIONS**

Either One

One year of research experience in a field relevant to the stated specialty. (One year toward completion of an advanced degree of the stated specialty or a closely related field may be substituted for this experience.)

AND

Possession of a bachelor’s degree in the stated specialty or a closely related field.

The required degree must have been obtained from a recognized U.S. university or from a foreign university approved by the Bureau of Private Postsecondary and Vocational Education under the provision of California Education Code Chapter 3, Part 59, Division 10.

**GENERAL QUALIFICATIONS**

In addition to the scope defined on this announcement, candidates must possess essential personal qualifications including integrity, initiative, dependability, good judgment, 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.

**POSITION DESCRIPTION**

**TYPICAL TASKS**

Under supervision of senior scientific research personnel, incumbents plan, organize, and carry out scientific research studies of limited scientific scope and complexity; may serve as a team member on public health projects and investigations or act as a technical scientific consultant on a specific phase of a more complex scientific study; make independent decisions in a very limited or restricted area of a specific scientific field; solve problems using standard principles, procedures, and techniques for their scientific area of expertise when fully trained, and perform other related work. The incumbent's work is reviewed to see that it conforms to established policies and procedures.

**CHEMICAL SCIENCES:**

Incumbents in this parenthetical are distinguished from other Research Scientists by being required to analyze and draw conclusions from research studies of chemistry as related to public and environmental health. This work requires broad knowledge of chemistry in the areas of analytical
chemistry, physical chemistry, organic chemistry, and biochemistry. Scientific research and investigation can also be conducted in pharmacology, toxicology, drug chemistry, food chemistry, biochemistry, environmental chemistry, clinical chemistry, immunochemistry, and molecular biology. Research study conclusions are used to improve detection and identification of chemicals and biochemicals including toxic chemicals, metabolites, nutrients, pharmaceuticals, and enzymes; assess environmental fate and transport of chemical pollutants; assess exposure pathways and body burdens of chemical pollutants in humans and biological receptors; assess relationships between body burdens and resultant health or ecological effects; to evaluate environmental or human exposures, effects, or risks; and investigate methods and technologies that have the potential to prevent adverse public and environmental health effects of chemical exposures.

**EPIDEMIOLOGY/BIOSTATISTICS:**

Incumbents in this parenthetical are distinguished from other Research Scientists by being required to design, conduct, analyze, and draw conclusions from epidemiologic or biostatistical investigations. These investigations apply statistical and survey techniques and biologic theory for the purpose of describing and understanding the distribution and determinants of disease, health, and genetic conditions in the population and the response of the health care system. Subspecialties focus on infectious agents (general communicable diseases, zoonotic diseases, food borne diseases, vector borne diseases): nutrition and lifestyle factors; social or environmental factors; health promotion; chemical and physical agents in the environment; chronic diseases and injuries; detection, distribution, and treatment of genetic disorders; other genetic influences on disease; and the efficacy of public health, clinical medical, and other interventions in modifying these influences. Scientific research, disease surveillance, and epidemiologic-based investigations are conducted to identify the source of human illness or injury, to prevent or control its occurrence, and to measure the effectiveness of those controls. Scientific research, disease surveillance, and epidemiologic investigations could evaluate the entire ecology of illness occurrence at the molecular or genetic level using molecular epidemiology.

**MICROBIOLOGICAL SCIENCES:**

Incumbents in this parenthetical are distinguished from other Research Scientists by being required to analyze and draw conclusions from research studies of the microbial, viral, and immunologic aspects of infectious diseases. Work in a subspecialty requires broad knowledge in a specific area of bacteriology, parasitology, mycology, virology, microscopy, molecular biology/microbial genetics, food, and water microbiology. Research study conclusions are used to improve detection and identification of infectious disease-causing microorganisms; define mechanisms and modes of infectious disease transmission; identify mechanisms of tissue injury; support improved investigation of infectious disease outbreaks; and improve methods to prevent infectious disease transmission.

**PHYSICAL/ENGINEERING SCIENCES:**

Incumbents in this parenthetical are distinguished from other Research Scientists by being required to analyze and draw conclusions from research studies of the physical and engineering sciences relevant to public and/or environmental health. This work requires broad knowledge in Physical/Engineering Sciences in areas such as non-industrial indoor air quality, community air quality, occupational air quality, air pollution control, mechanical or ventilation engineering, atmospheric pollution, atmospheric physics, microscopy, material sciences, and industrial hygiene. Engineering and physical science research and investigations can be conducted in areas such as radiation safety, environmental safety, occupational safety, and water safety. Research study conclusions are used to improve detection and identification of physical agents of public and/or environmental health significance; identify sources, environmental fates, and transport of physical agents; assess exposure pathways and body burdens of physical agents in human and biological receptors; assess the relationships between body burdens and resultant health and ecological effects; and investigate technologies which have potential to protect public health and the environment from effects of exposures to physical agents. Incumbents provide consultation to industry and other governmental agencies on the scientific technological aspects of water safety, radiation safety, environmental safety, and occupational safety as appropriate to technical expertise.
SOCIAL/BEHAVIORAL SCIENCES:
Incumbents in this parenthetical are distinguished from other Research Scientists by being required to apply the theoretical models and research methods of the social/behavioral sciences, particularly the disciplines of psychology, sociology, anthropology, economics, and political science as they relate to public health issues. Work in this parenthetical requires knowledge in one or more of these disciplines to conduct analyses of personality, community, cultural, family, economy, and policy on health, health behavior, treatment, and disease prevention in California. This specialty carries out scientific work related to the evaluations of public health programs. Among the factors the incumbent examines for health behavior implications are: social and economic trends, race, social and economic inequality, economic impacts and cost factors of policies, ethnic diversity, personality and psychological factors, individual and organizational performance, community dynamics and structure, and community and statewide decision making and policy development. The results of this research would be used in developing new effective public health prevention programs focused on preventing unhealthful behaviors and promoting health by behavior modification through health education.

HOW TO APPLY
To apply for this examination, please complete and return the following:

STANDARD STATE APPLICATION (FORM 678)

COPY OF UNOFFICIAL/OFFICIAL COLLEGE TRANSCRIPTS

Applications and any additional documents must be submitted via the U.S. Postal Service or hand delivered to the Department of Public Health Human Resources Office (hours are 8:00 AM to 5:00 PM). Submit (California State Application STD 678) and any additional documents to:

DEPARTMENT OF PUBLIC HEALTH
Examination Services Unit
1615 Capitol Ave., 4th floor, Suite 73-430
P.O. Box 997378 MS 1700 – 1702
Sacramento, CA 95899-7378

DO NOT SUBMIT APPLICATIONS
TO THE CALIFORNIA DEPARTMENT OF HUMAN RESOURCES (CalHR)
THROUGH EMAIL
THROUGH FAX
THROUGH INTER-AGENCY MAIL

CONTACT INFORMATION
All questions regarding the minimum qualifications, applying for the examination, being scheduled for the examination, reasonable accommodations, the examination components, scoring, etc., may be directed to the contact information below:

PHONE NUMBER: 916-552-8959
EXAMINATION INFORMATION

The examination will consist of a Qualifications Assessment and is the sole component of the Research Scientist I (Various Specialties) examination. To obtain a position on the eligible list, a minimum score of 70% must be received. The Qualification Assessment is designed to elicit specific information regarding each candidate’s education, training, and rating criteria. The Qualifications Assessment package will be emailed to the applicant in the form of a survey. Please monitor your email account’s SPAM, Junk, Bulk, etc. folder(s) as the examination email may be filtered depending on your specific account settings.

The participating department’s reserves the right to revise the examination plan to better meets the needs of the service in the circumstances under which this examination has changed. Such revision will be in accordance with civil service law and rules and all competitors will be notified.

REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION

It is your responsibility to make sure you meet the education and/or experience requirements stated on this announcement on the date you submit your application. Your signature on your application indicates that you have read, understood, and possess the basic qualifications required.

NOTE: Applications must include “to” and “from” dates (month/day/year), time base, job titles and/or civil service class title(s), and range (if applicable) for all work experience. College course Information must include title, number of semester or quarter units, name of institution, completion dates, and degree. Applications received without this information will be rejected. Applicants must submit a copy of unofficial/official transcripts along with the application when using education to meet the entrance requirements for this examination.

SCOPE OF EXAMINATION: Ratings will be determined based on the depth and breadth of professional education and experience beyond what is minimally required. Emphasis will be placed on measuring:

Knowledge of:

1. Data management.
2. Current scientific literature applicable to the research area.
3. Preparation of scientific reports.
4. Basic research methodologies.
5. Study design.
6. Laboratory sampling techniques.
8. Statistical software applications.
9. Database design.
10. Surveillance methods.
11. Research proposal development and/or grant preparation.
12. Operational definitions of scientific measures.
14. Quality assurance and quality control methods and procedures.
15. Scientific principles.
17. The fundamental information resources in one’s specialty field.
Skills to:

1. Write effectively for various purposes.
2. Communicate orally to various audiences.
3. Evaluate and apply estimation techniques and avoid bias in research results.
4. Execute statistical analyses using software packages.
5. Maintain professional and scientific integrity.

Ability to:

1. Perform elementary statistical analysis.
2. Perform literature review.
3. Write scientific reports and manuscripts.
4. Manage a database.
5. Develop survey instruments to collect information.
6. Perform quality assurance to maintain the integrity of the data.
7. Interpret the validity of scientific information.
8. Interpret the findings of an analysis.
9. Communicate effectively both orally and in writing research findings for various audiences.
10. Apply existing laboratory and/or modeling methods.
11. Collaborate with others.
12. Work independently.
13. Apply near real-time field analysis methods.
14. Prepare tables and graphs.
15. Critically evaluate and synthesize a body of scientific information.
16. Develop innovative laboratory and/or modeling methods.
17. Design a database.
18. Identify equipment, supplies, and other resources needed to perform duties.
19. Empirically define and standardize scientific measures.
20. Extract and analyze data for use in complex scientific studies.
21. Listen well and be responsive to requests for assistance.
22. Apply own specialized technical knowledge to others’ projects as requested.
23. Provide quality assurance/quality control of existing, new, and modified procedures, equipment, and data.
24. Evaluate statistical software capabilities and limitations.
25. Generate accurate and complete laboratory reports.
26. Evaluate the adequacy of existing programs and feasibility of planned programs.
27. Coordinate and fulfill ad hoc and ongoing data requests.
28. Maintain accurate and complete records and logs.
30. Prepare budget recommendations for equipment, supplies, and other resources needed to perform duties.
31. Act as a project lead.
32. Provide scientific guidance to colleagues.
33. Contribute to a positive professional collaborative work environment.

NOTE: Please be aware that not all KSAs are required for each specialty.

ELIGIBLE LIST INFORMATION

In order to obtain a position on the eligible list, a minimum rating of 70% must be attained. Names of successful competitors are merged into a departmental open list established for use by the California Department of Public Health in order of final scores regardless of testing date. Eligibility expires 18 months after it is established unless the needs of the service and conditions of the list warrant a change in this period. All candidates meeting the minimum qualifications will be placed on the eligible list.
VETERAN'S PREFERENCE

Will be awarded in this examination, pursuant to Government Code Section 18973.1, effective January 1, 2014, 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; 3) Veterans’ Preference is not granted once a person achieves permanent civil service status.

HOW TO APPLY FOR VETERANS’ PREFERENCE

The California State Jobs' website (www.jobs.ca.gov) has information on how to apply for Veterans’ Preference on their website and on the Application for Veterans’ Preference form (CalHR 1093) (https://jobs.ca.gov/PDF/SPB1093.pdf). Additional information is also available at the Department of Veterans Affairs website (http://www.cdva.ca.gov).

TDD is Telecommunications Device for the Deaf and is reachable only from phones equipped with a TDD device.

The California Relay (Telephone) Service for the deaf or hearing impaired:
MCi from TDD: 1-800-735-2929  MCi from voice telephone: 1-800-735-2922
Sprint from TDD: 1-888-877-5378 Sprint from voice telephone: 1-888-877-5379
CONDITIONS OF EMPLOYMENT (631)
Examination Title: Research Scientist I (Various Specialties)

Name: __________________________ (Print: first, middle initial, last)

Final Filing Dates:

JANUARY 5, 2017
MARCH 6, 2017
MAY 5, 2017
JULY 5, 2017
SEPTEMBER 5, 2017
NOVEMBER 6, 2017
JANUARY 5, 2018

If you are successful in your examination your name will be placed on the active employment list and certified to fill vacancies according to the conditions you specify on this form. If you are unwilling to accept work or do not reply promptly to communications your name will be placed on the inactive list.

Locations in which you are willing to work:
Please check your choices - you will not be offered a job in locations not checked.

Alameda County (0100) ________
Amador County (0300) ________
Contra Costa County (0700) ______
Sacramento County (3400) ______

TYPE OF EMPLOYMENT DESIRED:

ON A PERMANENT BASIS, I AM WILLING TO WORK:
   _____ Full Time
   _____ Part Time (regular hours less than 40)
   _____ Intermittent (on call)
   _____ Limited Term

ON A TEMPORARY BASIS, I AM WILLING TO WORK:
   _____ Full Time
   _____ Part Time (regular hours less than 40)
   _____ Intermittent (on call)
   _____ Limited Term

It is your responsibility to notify the Department of Public Health, Examination Services Unit, of any changes in your address or availability for employment. All correspondence must include your name, examination title, and identification number.

Signature: __________________________ Date: __________________________