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Downloaded On: May. 9, 2024 12:05am Posted Mar. 14, 2024, set to expire Jun. 30, 2024

Job Title Production Engineer (7118U) Job 66102 - Pavement

Research Center (PRC)

**Department** Pavement Research Center

**Institution** University of California, Berkeley

Berkeley, California

Date Posted Mar. 14, 2024

**Application Deadline** Open until filled

Position Start Date Available immediately

Job Categories Professional Staff

Research Scientist/Associate

Academic Field(s) Civil Engineering

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**Job Description** 

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Production

Production Engineer (7118U) Job 66102 - Pavement Research Center (PRC)

### **About Berkeley**

At the University of California, Berkeley, we are committed to creating a community that fosters equity of experience and opportunity, and ensures that students, faculty, and staff of all backgrounds feel safe, welcome and included. Our culture of openness, freedom and belonging make it a special place for students, faculty and staff.



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The University of California, Berkeley, is one of the world's leading institutions of higher education, distinguished by its combination of internationally recognized academic and research excellence; the transformative opportunity it provides to a large and diverse student body; its public mission and commitment to equity and social justice; and its roots in the California experience, animated by such values as innovation, questioning the status quo, and respect for the environment and nature. Since its founding in 1868, Berkeley has fueled a perpetual renaissance, generating unparalleled intellectual, economic and social value in California, the United States and the world.

We are looking for equity-minded applicants who represent the full diversity of California and who demonstrate a sensitivity to and understanding of the diverse academic, socioeconomic, cultural, disability, gender identity, sexual orientation, and ethnic backgrounds present in our community. When you join the team at Berkeley, you can expect to be part of an inclusive, innovative and equity-focused community that approaches higher education as a matter of social justice that requires broad collaboration among faculty, staff, students and community partners. In deciding whether to apply for a position at Berkeley, you are strongly encouraged to consider whether your values align with our Guiding Values and Principles, our Principles of Community, and our Strategic Plan.

At UC Berkeley, we believe that learning is a fundamental part of working, and our goal is for everyone on the Berkeley campus to feel supported and equipped to realize their full potential. We actively support this by providing all of our staff employees with at least 80 hours (10 days) of paid time per year to engage in professional development activities. To find out more about how you can grow your career at UC Berkeley, visit grow.berkeley.edu.

## **Departmental Overview**

The University of California Pavement Research Center (UCPRC) carries out leading-edge research on a wide range of pavement-related fields. With facilities at both UC Berkeley and UC Davis, the UCPRC provides state-of-the-art knowledge, advice, and technology to practitioners, research community, and decision-makers that include Caltrans, FHWA, FAA, CalRecycle, CARB, and local governments, in the areas of:

- Pavement design and modeling
- Full-scale testing of pavements
- Pavement materials
- Life cycle analysis of pavements

The candidate hired in this role learns to use professional engineering concepts within a construction



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materials testing laboratory. The position applies standard laboratory practices, as well as AASHTO and Caltrans procedures, to test pavement materials, using a number of testing machines and materials. Over the first year position acquires a specialization in the use and maintenance of one or more testing machine and establishes a testing schedule to meet research requirements. The incumbent analyzes test data and assists senior engineers with troubleshooting problems, adjusting experiment designs, testing protocols, and preparing research reports. The candidate also assists with quality control of specimens being prepared for testing and may participate in training and directing laboratory technicians.

\*\*This is a one-year contract\*\*

### **Application Review Date**

The First Review Date for this job is: 3/26/24 - Open Until Filled

#### Responsibilities

### \*\*This is a one-year contract\*\*

**50% -** Acquires and develops skills in project management. Contributes to the fabrication of test specimens. Tracks projects to maximize production and meet research objectives. Directly involved in laboratory quality control in support of specimen fabrication and other laboratory activities. Reports to Laboratory Managing Engineer on laboratory productivity. Schedules laboratory staff based on skill sets and project requirements. Assists preparation of testing schedules for multiple projects on shared equipment. Uses Gantt charts, control charts, and other project management techniques as they relate to pavement specimen preparation and testing.

**20% -** Assists with field work throughout the State, which includes plant sampling, coring pavements, backfilling holes, carrying equipment and supplies to fellow field crew members, pavement instrumentation, and running sophisticated field test equipment to measure pavement surface and structural properties. Work is conducted on an as-needed basis, including evening and weekends hours, along highways in all parts of California.

**10% -** Under direct supervision and review, participates in engineering and mathematical analysis of experimental data, using spreadsheets and statistical software to fully evaluate specimen performance. Acquires skills to independently perform more complex analyses with additional software tools.



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Promotes safety by reviewing and updating operating procedures for the testing machines, including contingency plans for electrical outages, leaks, or other potential hazards. Serves as emergency contact person for machine(s) of specialization, such as the fatigue, shear, Hamburg, or AMPT testing machines. Performs safety checks and provides individualized safety instruction to junior staff to ensure maintenance of safety consciousness within the laboratory.

**5% -** Under review of Associate Research Engineer, and direct supervision of Laboratory Managing Engineer, applies engineering knowledge to conduct tests on asphalt concrete laboratory specimens with several servo-hydraulic and pneumatic testing machines, including three fatigue testing machines, a shear machine, and a Hamburg machine. Also, operates Cox concrete press to test concrete specimens. Within two years of employment develops specialization in one or more test machines. Assists other testing engineers with cross training and maintenance of that machine. Each machine requires customized set up for every experiment and engineering judgment each time they are run. Modifications to machines and testing protocols will be required in some instances. Maintains, calibrates, and troubleshoots the machines, including their electronic controls and programmable testing software. Monitors tests for engineering reasonableness and intervenes as necessary to protect the machine and preserve specimens. Work may need to be conducted on a non-routine schedule, and may require evenings and/or weekend hours.

**5% -** Contributes to summary reports and technical memorandums by explaining sophisticated test results in intelligible language. Prepares graphs, charts, and slides for presentations to clients and management.

### **Required Qualifications**

- BS in Civil Engineering or equivalent knowledge and experience.
- Knowledge of basic asphalt production methods.
- Basic knowledge of engineering statistics.
- Requires effective written and verbal communication skills.
- Ability to work in a collaborative manner with researchers, technicians, and undergraduate assistants.
- Ability to perform physical work in varied outdoors conditions.
- Ability to lift and carry 40 pounds with appropriate tools.

#### **Preferred Qualifications**

BS or advanced degree in Civil Engineering.



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- Experience in asphalt laboratory research.
- Ability to learn test data reduction and analysis.
- Ability to perform computer graphing of engineering data.
- Ability to learn to use sophisticated hydraulic/pneumatic test equipment.
- Knowledge of testing methods of asphalt concrete, asphalt binders, or other pavement materials.

### Salary & Benefits

For information on the comprehensive benefits package offered by the University, please visit the University of California's Compensation & Benefits website.

Under California law, the University of California, Berkeley is required to provide a reasonable estimate of the compensation range for this role and should not offer a salary outside of the range posted in this job announcement. This range takes into account the wide range of factors that are considered in making compensation decisions including but not limited to experience, skills, knowledge, abilities, education, licensure and certifications, analysis of internal equity, and other business and organizational needs. It is not typical for an individual to be offered a salary at or near the top of the range for a position. Salary offers are determined based on final candidate qualifications and experience.

The budgeted salary or hourly range that the University reasonably expects to pay for this position is \$30.84 - \$40.71.

This is a one-year contract position. Contract positions may be extended based on operational demand. Contract positions are eligible to participate in the health and welfare programs offered by UC Berkeley.

#### Other Information

#### Education/Training:

- Bachelor of Science degree in Engineering.
- At least one semester/quarter course in pavement engineering (preferred not mandatory).
- Training in or knowledge of AASHTO/Caltrans standard test procedures for asphalt, concrete, aggregate, and soil.



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### **Conviction History Background**

This is a designated position requiring fingerprinting and a background check due to the nature of the job responsibilities. Berkeley does hire people with conviction histories and reviews information received in the context of the job responsibilities. The University reserves the right to make employment contingent upon successful completion of the background check.

### **Equal Employment Opportunity**

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or protected veteran status. For more information about your rights as an applicant, please see the <a href="U.S. Equal Employment Opportunity Commission">U.S. Equal Employment Opportunity Commission</a> poster.

For the complete University of California nondiscrimination and affirmative action policy, please see the University of California Discrimination, Harassment, and Affirmative Action in the Workplace policy.

### To apply, visit

https://careerspub.universityofcalifornia.edu/psp/ucb/EMPLOYEE/HRMS/c/HRS\_HRAM.HRS\_APP\_SCH

#### Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

#### Contact

N/A

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