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Posted Sep. 23, 2024, set to expire Jan. 19, 2025

Job Title R&D Engineer 2 (7119U) - Mechanical Engineering

Department

Institution University of California, Berkeley

Berkeley, California

Date Posted Sep. 23, 2024

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Professional Staff

Academic Field(s) Research/Technical/Laboratory

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Job Description

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R&D Engineer 2 (7119U) - Mechanical Engineering

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.

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



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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 Department of Mechanical Engineering is a large academic department within the College of Engineering with 41 faculty, 21 career staff, and approximately 1000 students. The Department has research and instructional laboratories in Etcheverry Hall, Hesse Hall, and the Richmond Field Station. Mechanical Engineering's Technical & Instructional Support Group consists of 8 career staff and forms the primary support to research laboratories, instructional laboratories, and a complete student access machine shop.

Aerospace Engineering Major Program

At Berkeley Engineering, we offer a modern aerospace engineering major that combines comprehensive topical coverage, technical rigor and practical relevance. This major has been designed from the ground up for students who aspire to become leaders in an emerging era of aerospace technologies, including sustainable aviation, autonomous flight and space exploration. With a UC Berkeley aerospace engineering degree, you can find employment in industry - such as multinational corporations that design and manufacture aerospace systems at scale, or mid-size and small private companies that develop targeted technologies - or in federal government agencies such as NASA, the FAA or federal defense organizations.



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This position is critical to the Department of Mechanical Engineering's and to the Aerospace Program's instructional teaching missions, since a significant number of the courses require students to design and build complex class projects to illustrate and provide practical experience. This position also is critical in maintaining safe, supervised undergraduate and graduate laboratory operations, as many of the experiments can be hazardous if not properly executed. Experienced professional oversight in the instruction and interaction of these laboratories' tools is paramount in developing a positive student experience while reducing the potential risk of injury.

Application Review Date

The First Review Date for this job is: October 4, 2024 - Open Until Filled **Responsibilities**

30% Under general supervision, the R&D Engineer performs and/or supervises the performance of laboratory and experimental facilities, equipment, and instrument systems; supervises and/or coordinates the construction, assembly, and testing of laboratory and experimental facilities, equipment, and instrument systems; provides training and supervision to students, as well as career technical staff in the laboratories on safety, proper use of tools and processes, contemporary laboratory testing, and advice on functional design issues related to working on unique and potentially volatile experiments. The R&D Engineer would work with faculty and students in the design and fabrication of complex class and research projects, including plan and conduct small scale experimental test programs in subsonic wind tunnel test facilities. The incumbent's duties also include assisting management in establishing program goals and objectives, ensuring project work plan is followed, determining action steps, time frames, and resources for achieving the goals and objectives, evaluating and keeping management apprised of status and progress of work including delays, modifications, and/or problems, identifying and elevating issues to management, identifying and requesting resources needed to efficiently and effectively accomplish work objectives, identifying areas of deficiency, and assisting in identifying appropriate corrective action.

30% Under general supervision, conducts design reviews, provides recommendations on best practices for manufacturability of individual, group class and student club project designs. Prepares engineering plans and specifications of moderate- to high-level of complexity for novel instructional and research laboratory equipment and instruments. Work independently and collaboratively on the design, construction, assembly, debugging, testing, installation, and maintenance of experimental mechanical and electronics (digital and analog) and instrument systems used by undergraduate students and graduate student instructors in instructional labs.

20% Under general supervision, participate in the solution of physical and mathematical analysis of



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experimental data or in the mathematical solution of physical and engineering problems. Ability to program in CAD/CAM toolpath software. Ability to write device driver code and custom libraries in various OS includes but not limited to Linux and Windows for students to use in communicating with different interface boards. Instruct and assist students in programming techniques in Java, C/C++, LabView, assembly language and other computer languages for communication with computer/microprocessor interface boards. Gather and analyze data; prepares formal engineering reports, drawings and status reports. Write test software and procedures to verify proper operations of equipment and interoperability between equipment and subsystems in the labs, and help in the troubleshooting and repair of equipment.

20% Perform duties of Technical & Instructional Laboratory Safety Officer, conduct required monthly safety inspections, perform annual chemical inventory, disposal of waste materials and in collaboration with Technical Group Manager plan and participate in safety training for staff. Assist in coordination of corrections of outstanding safety inspection issues. Maintain and repair instructional laboratory machinery and equipment as necessary. Act as an information resource and communication link on safety matters. Assist with maintaining chemical inventory and other safety records. Perform office and laboratory maintenance including moving of offices, labs, and equipment, as well as other duties as assigned.

Required Qualifications

- Bachelor's degree in related area and / or equivalent experience / training.
- Working knowledge of engineering principles and methods in order to independently perform professional design work of limited scope and complexity.
- Working knowledge necessary to begin independent application of principles, practices and procedures in the completion of assignments.
- Organizational abilities and decision-making to prioritize work assignments.
- Effective written and verbal communication skills.
- Ability to work in a collaborative manner, to assist in identifying any challenges or barriers.
- Fluency in Mechanical modeling and analysis.
- Fluency in aerodynamic imaging technique (Schlieren).

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



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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 \$85,000 to \$115,500 yearly (\$7,083.33 to \$9,625.00 monthly). This is a 100% FTE career position eligible for full benefits. This position is FLSA Exempt and paid monthly.

Referral Source info

This job is part of the Employee Referral Program. If a UC Berkeley employee is referring you, please ensure you select the **Referral Source** of "*UCB Employee*". Then enter the employee's **Name**and **Berkeley email** address in the **Specific Referral Source** field. Please enter only one name and email. **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 <u>U.S. Equal Employment Opportunity Commission</u> poster.

The University of California's Affirmative action policy.

The University of California's Anti-Discrimination policy.

To apply, visit

https://careerspub.universityofcalifornia.edu/psc/ucb/EMPLOYEE/HRMS/c/HRS_HRAM_FL.HRS_CG_S



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Contact Information

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

Contact

N/A

University of California, Berkeley

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