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Posted Mar. 20, 2025, set to expire Jul. 1, 2025

Job Title Director of Instructional Support (0446U) - Physics

Department Physics

Institution University of California, Berkeley

Berkeley, California

Date Posted Mar. 20, 2025

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Director/Manager

Professional Staff

Academic Field(s) Physics - General

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Job Description

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Director of Instructional Support (0446U) - Physics

About Berkeley

At the University of California, Berkeley, we are dedicated to fostering a community where everyone feels welcome and can thrive. Our culture of openness, freedom and belonging make it a special place for students, faculty and staff.

As a world-leading institution, Berkeley is known for its academic and research excellence, public mission, diverse student body, and commitment to equity and social justice. Since our founding in



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1868, we have driven innovation, creating global intellectual, economic and social value.

We are looking for applicants who reflect California's diversity and want to be part of an inclusive, equity-focused community that views education as a matter of social justice. Please consider whether your values align with our <u>Guiding Values and Principles</u>, <u>Principles of Community</u>, and <u>Strategic Plan</u>.

At UC Berkeley, we believe that learning is a fundamental part of working, and provide space for supportive colleague communities via numerous employee resource groups (staff organizations). 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 full-time staff employees with at least 80 hours (10 days) of paid time per year to engage in professional development activities. Find out more about how you can grow your career at UC Berkeley.

Departmental Overview

Berkeley Physics has a long history of game-changing research, pioneer scientists, world-class students, and Nobel prizes. After World War I, the University invested tremendously in the department and helped to make the West Coast a hub for physics research. Physics is the largest department in the L&S Division of Mathematical and Physical Sciences. It is ranked as one of the top physics departments in the world, with excellence in research, teaching, and service to the community all highly valued. The department has 80 ladder and active emeriti faculty, 60 career and casual staff, and 300 lecturers, teaching assistants, readers, research personnel, postdocs, fellowship recipients, and visiting scholars. It enrolls 250 graduate students, 250 undergraduate majors, and over 7,000 students in its courses, many with laboratory sections. Its faculty fully participates in teaching and administration and conducts world-class research in campus, local, national, and international laboratories and sites; research activities require active financial arrangements with organizations such as Lawrence Berkeley National Lab. Physics manages 3 distinct campus buildings in its facilities complex with 240,000 assignable square feet, and it also houses and provides services to several research centers and multiple research Laboratories with varying physical environments. Physics at Berkeley continues to transform the way we view the Universe as well as spark world-changing, technological revolutions.

This position supervises the instructional Support Team, including research/instructional associates and engineering staff, which manages instructional lab spaces and/or provides lecture demonstrations for thirteen large undergraduate courses per semester serving more than 2500 students as well as some limited outreach activities to external constituencies. The eight large lower-division introductory courses are service courses for students in biology, engineering, chemistry, architecture, physical sciences, social sciences, and humanities while also functioning as a gateway to the physics major. Upper division courses serve primarily physics majors. The instructional Support Team provides day-to-



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day management of the labs and troubleshooting of experiments and demonstrations so the faculty can focus on working directly with students.

Using knowledge of modern data acquisition systems, sensors, and experimental software, and an understanding of computing environments for physics labs, this position works closely with faculty to develop and support technological innovation in teaching methodologies and the use of technology in support of learning goals. This can include a range of activities such as affecting significant shifts in teaching pedagogy, new engineering advancements in experimental software and lab equipment, introduction of peer-learning techniques, and significant shifts in course staffing.

Application Review Date

The First Review Date for this job is: April 1, 2025 - Open Until Filled

Responsibilities

35% - In support of the Department's teaching mission, supervises the development and execution of major educational laboratory projects.

- Performs staff management activities to include recruitment, performance evaluations, scheduling and handling disciplinary issues. Recommends hiring of new employees, salary actions, terminations, and performance ratings.
- In addition to supervising R&D Engineer and lab and demonstration staff, may supervise other
 engineering technical support staff members such as interns, student employees and contracted
 employees.
- Ensures operations run smoothly; assists staff in assessing priorities and organizing work.

25% -Oversees large and multi-facility educational laboratories consisting of the physics lecture demonstration facility, lower division instructional laboratories and the advanced experimentation laboratory. Supervises the development and execution of instructional and experiment design.

- In collaboration with the faculty, responsible for assigned research projects, to include the design, construction and testing of complex instructional labs for introductory and advanced physics lab courses using modern data acquisition systems, sensors, and experimental software, ensuring that teaching space meet the needs of defined learning goals.
- Ensures the planning and organizing of initiatives and projects for all instructional lab spaces, from conception to roll out. Consider improvements and updates to the online Computational



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Problem Bank, currently in Jupyter Notebooks, to ensure the platform is stable and accessible.

10% - Evaluates aging laboratory set ups and works with faculty to implement their vision for the design of updated physics instructional lab spaces.

- Ensures that instructional apparatus and equipment are maintained properly.
- Assists staff with evaluating, upgrading and replacing of obsolete and non-functional equipment.
- Purchase equipment as needed, plan and budget for preventive maintenance.
- Provide equipment guidance for faculty and special projects.

10%

- Consults with faculty on the nature and objectives of the instructional labs' engineering needs, goals for lower and upper division physics courses.
- Support instructors to incorporate effective student-centered strategies in their classes.
- Keep current with physics instruction at other institutions, with new technologies useful in the classroom and with research in physics education.

5%

- Partners with Director of Finance on budgetary forecasting and planning, operational policy and procedure development and changes for instructional services.
- Participates in developing and monitoring operational and budget processes, staff FTE, finance, human resources and space planning.

5%

- Advises staff on the more difficult or challenging engineering aspects of delivering instructional support in areas such as design, construction, testing of experimental systems, operating analytical systems, establishing performance specifications and documentation.
- Adapts and modifies procedures and equipment in the teaching lab as new techniques are developed.



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5%

- Administers policies and programs according to Campus guidelines for assigned staff members, including compliance with safety protocols and regulatory compliance.
- Train assigned staff and Graduate Student Instructors on proper use of the equipment and safety protocols.

5%

• May collaborate with faculty to write proposals for internal and external funding of instructional improvements, innovations, and outreach. Actively participate in departmental committees related to courses, instruction and instructional policy and lab safety exercises.

Required Qualifications

- Bachelor's degree in related area and / or equivalent experience / training.
- Solid knowledge of lab environments and the way technology is utilized in the service of learning.
- Demonstrated leadership and management skills in a complex organization with proven ability to apply management principles, lead technical staff, organize and establish priorities, and establish unit goals and outcomes.
- Highly effective organizational and communication skills in order to convey complex information in an effective manner.
- Ability to work in a collaborative manner; identify challenges and barriers and provide resolution.
- Demonstrated ability to lead, motivate and influence others.
- Understanding of computing environments for physics labs (e.g., Python, MATLAB, LabVIEW, Arduino, or similar tools).
- Advanced knowledge of instructional methods and design to collaborate effectively with faculty and function as a resource to instructional associates.
- Solid interpersonal skills to develop and maintain effective working relationships with students, faculty and staff.
- Knowledge of modern data acquisition systems, sensors, and experimental software.
- Experience overseeing the design, maintenance, and upgrading of instructional lab equipment.
- Familiarity/experience with general laboratory guidelines (chemicals, radiation, laser safety, etc).
- Background in physics or closely related STEM field.
- Familiarity with use of experimental setups and instructional demonstrations for undergraduate



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physics curricula and lab-based learning.

Preferred Qualifications

- Masters degree in Physics, Electrical Engineering, Quantum, or closely related physical science, or a Bachelors degree and substantial graduate study in these fields.
- Ph.D. in Physics, Electrical Engineering, or Quantum (or equivalent balance of education and experience).
- Understanding of Learning Management Systems (LMS), digital platforms for online homework and lab submissions. Familiarity with new teaching methodologies, including digital and remote labs.
- Knowledge of current, relevant research and best practices in physics education as they pertain to instructional labs and lecture demonstrations, classroom and on-line instruction.

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 \$115,000 to \$135,000 yearly (\$9,583.33 to \$11,250.00 monthly). This is a 100% FTE career position eligible for full benefits. This position is FLSA Exempt and paid monthly.

How to Apply

To apply, please submit your resume, cover letter and Diversity Statement.

Diversity Statement



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Please include, as part of your application a brief (1-2 paragraph) statement on your contributions to diversity, equity, inclusion, and belonging in your professional experience.

Advancing diversity, equity, and inclusion are fundamental to our UC Berkeley Principles of Community, which states that "every member of the UC Berkeley community has a role in sustaining a safe, caring, and humane environment in which these values can thrive."

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 E-mail** 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.



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Misconduct Disclosure

As a condition of employment, the final candidate who accepts a conditional offer of employment will be required to disclose if they have been subject to any final administrative or judicial decisions within the last seven years determining that they committed any misconduct; received notice of any allegations or are currently the subject of any administrative or disciplinary proceedings involving misconduct; have left a position after receiving notice of allegations or while under investigation in an administrative or disciplinary proceeding involving misconduct; or have filed an appeal of a finding of misconduct with a previous employer.

"Misconduct" means any violation of the policies or laws governing conduct at the applicant's previous place of employment, including, but not limited to, violations of policies or laws prohibiting sexual harassment, sexual assault, or other forms of harassment, discrimination, dishonesty, or unethical conduct, as defined by the employer. For reference, below are UC's policies addressing some forms of misconduct:

UC Sexual Violence and Sexual Harassment Policy
UC Anti-Discrimination Policy
Abusive Conduct in the Workplace



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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.S. Equal Employment Opportunity Commission 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

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