

Principal Lab Mechanician (8651C) Job  
University of California, Berkeley

Direct Link: <https://www.AcademicKeys.com/r?job=125621>

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Posted Jul. 15, 2019, set to expire Nov. 8, 2019

<b>Job Title</b>	Principal Lab Mechanician (8651C) Job
<b>Department</b>	
<b>Institution</b>	University of California, Berkeley Berkeley, California
<b>Date Posted</b>	Jul. 15, 2019
<b>Application Deadline</b>	Open until filled
<b>Position Start Date</b>	Available immediately
<b>Job Categories</b>	Professional Staff
<b>Academic Field(s)</b>	Research/Technical/Laboratory Facilities/Maintenance/Transportation
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**Job Description**

About Berkeley

The University of California, Berkeley, is one of the world's most iconic teaching and research institutions. Since 1868, Berkeley has fueled a perpetual renaissance, generating unparalleled intellectual, economic and social value in California, the United States and the world. Berkeley's culture of openness, freedom and acceptance—academic and artistic, political and cultural—make it a very special place for students, faculty and staff.

Berkeley is committed to hiring and developing staff who want to work in a high performing culture that supports the outstanding work of our faculty and students. In deciding whether to apply for a staff position at Berkeley, candidates are strongly encouraged to consider the alignment of the Berkeley Workplace Culture with their potential for success at <http://jobs.berkeley.edu/why-berkeley.html>.

Application Review Date

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The First Review Date for this job is: 7/1/2019

### Departmental Overview

The Principal Lab Mechanician position is to provide professional technical, mechanical, and engineering development and maintenance support of the facilities, equipment, and processes of the Marvell Nanofabrication Laboratory (NanoLab) and for faculty research laboratories and support spaces within College of Engineering and for other campus and inter-campus departments.

Under the general supervision of the Cory Hall Machine Shop Engineering Technical Supervisor, the Principal Mechanician is responsible for translating non-specific specialized fabrication requests into custom designs and then into functional parts for a wide range of semiconductor processing and nanotechnology equipment for the Nanofabrication Laboratory and for faculty research laboratories and support spaces especially in the EECS Department but often in other departments throughout the College of Engineering and the College of Letters and Sciences.

In addition, the Principal Mechanician provides functional design support for components of various specialized laboratory utilities, such as air, compressed gases, nitrogen, oxygen, heating ventilating and air conditioning, cooling water and process waste streams. Semiconductor research facilities are among the most complex, costly, and technically demanding research facilities. Included in the mission of the Cory Hall Machine Shop is supporting such an operation.

### Responsibilities

#### 50% Design and Fabrication:

Utilizing “functional design” as defined by UC “series concepts” develop solutions to researchers’ project challenges. Apply a high degree of comprehension of the researchers needs and understand the restrictions of the test environment. Utilize Computer Aided Design (CAD) software to design intricate, complicated and specialized prototype devices used in semi-conductor research/development (R&D) projects. Fabricate intricate devices by programming, set-up and verifying, computer numerically controlled (CNC) milling machines and lathes. Utilize “manually operated” milling machines, lathes, saws, grinders, drill presses, and all other tools/tooling found in machine shop environments including hand tools. Selecting from a broad range of materials both ferrous and non-ferrous metals such as stainless steel, carbon steel, HSS, aluminum, brass, copper, OFHC copper, and a wide range of plastics and ceramics, etc. Determine and communicate which materials are the best choice for application. Ability to communicate and defend your decisions to a very diverse set of clients to ensure best solutions for their research environment.

#### 30% Equipment and Facilities Support:

Supervise mechanical work, project manage various semiconductor equipment installations. Functions

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include: receive, install, develop, facilitate, modify and repair of the following types of nanotechnology equipment:

- Chemical waste remediation station
- Equipment delivery, site preparation, and installation
- Toxic/Corrosive gas line installation using orbital welding process
- Fabrication/repair of chemical resistant tanks/vessels using plastic welding process
- Class-100 cleanroom environments
- Safety, inventory, plumbing
- Vacuum system support and vacuum pumps
- Custom work holders for specialized scientific equipment

Incumbent must respond quickly to equipment problem reports. Update status, repair and document systems using the NanoLab computer and software programs.

### 10% Documentation:

- Understand and use the Mercury database to mark equipment status, enable tools, enter comments and problem reports and add needed support documents.
- Write, edit and revise equipment manuals, support documents, startup and shutdown procedures; writes annual report and additional reports as needed.
- Utilizing the Machine Shop Jobs Management System maintain up-to-date records of assignments.
- Track and document job status.
- Maintain spare parts and a database of parts sources for assigned equipment.
- Define/suggest machine shop tooling/equipment upgrades.

10% Assist in the development of, and follow standard operating procedures and best known methods for safety and to prevent injuries:

- Practice and comply with safe working practices to assure personal safety and safety to the lab environment for colleagues and researchers.
- Understand and work within guidelines to protect the environment.
- Provide direction, guidance and training to less experienced engineers, staff and researchers.
- Offer instruction and training in support of staff development and equipment, support, and repair.

### Required Qualifications

- Demonstrated record of organization, clear communication and excellent attendance.
- Ability to work “independently”.
- Demonstrated record of “functional design” as defined by UC “series concepts”
- Experience with welding plastics.
- Experience with orbital welding of stainless steel and dissimilar metals.
- Ability to utilize manually controlled machine shop equipment. Milling machines, lathes, saws,



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welders, hand tools, etc.

- Ability to program, set-up and utilize numerically controlled milling machines, lathes.
- Ability to recognize and correct incomplete drawings, blueprints, sketches and work from oral instructions.
- Ability to design and make working drawings using CAD software; knowledge used to translate researcher concept sketches and specification requests into executable drawings.
- Demonstrated knowledge of MSDS corrosive/toxic chemicals and gases.
- Working knowledge of OSHA regulations.
- Excellent diagnostic, intuitive electronic and mechanical skills.
- Ability to work with a high degree of autonomy.
- Effective communication skills: able to communicate both verbally and in writing.
- Ability to work with colleagues and administrative staff; graduate and post-graduate researchers; principal investigators, scientists, and faculty.
- Ability to work with vendors to develop and repair equipment.
- Computer skills including equipment control.
- Troubleshooting skills.
- Ability to work in tight spaces.
- Class B California Driver's License.
- Fork Lift Certified.

### Preferred Qualifications

- A working knowledge of the Berkeley campus guidelines for safety and safe working skills.
- The ability to work with Environmental Health and Safety, Capital Projects, and Campus Facilities Services.
- Apply UC provided, OSHA based ladder or "man lift" safety training to proper and safe use of ladders and man lifts.
- Ability to "project manage".
- Bachelor's degree in related field or an equivalent combination of education and experience.

### Salary & Benefits

For information on the comprehensive benefits package offered by the University visit:

<http://ucnet.universityofcalifornia.edu/compensation-and-benefits/index.html>

\*Starting salary commensurate with experience.

### How to Apply

Please submit your cover letter and resume as a single attachment when applying.

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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

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