

Career Staff Opening

Electronics Engineer (RSCH AND DEV ENGR 3, JC007120)

Apply by April 6, 2023

Submit application via:

https://careerspub.universityofcalifornia.edu/psp/ucdavis/EMPLOYEE/HRMS/c/HRS_HRAM.HRS_APP_SCHJOB.GBL?Page=HRS_APP_JBPST&JobOpeningId=51079&PostingSeq=1&SiteId=7&languageCd=ENG&FOCUS=Applicant

JOB SUMMARY

Working independently under general direction, provide electronic design, fabrication, and repair services to faculty, research staff, and graduate students for a wide variety of research projects in the Physics & Astronomy Department at the University of California, Davis.

JOB FUNCTIONS

80% ELECTRONIC DESIGN, FABRICATION, AND REPAIR

Design and fabricate analog and digital electronic components for a wide variety of experimental projects. Combine these components, including custom circuit integration and power supply selection, with a skilled understanding of mechanical design to produce working electronic modules and instruments. Advise on electronic design and fabrication feasibility and cost estimate; and assist in the preparation of research proposals. Identify cost-effective and timely resources required to complete electronic projects. Acquire test data, develop specifications, and solicit quotations as necessary. Prepare cost projections for electronic design/fabrication projects. Order parts and services as needed for electronic projects. Manage electronic part inventories. Log project hours daily for accurate recharge of time and submit a monthly report to the department business office for billing purposes. Manage an annual operating budget for general materials and supplies and keep expenditures within the budget. Perform tasks such as general installation, certification, modification, testing, and repairing of electronic equipment.

20% TRAINING AND CONSULTATION

Provide oversight on safe, efficient use of user electronic facilities. Instruct faculty, research staff, and graduate students on basic, safe practice in design, fabrication, operation of electronic parts and assemblies. Provide guidance to researchers and graduate students on using electronic resources, including printed and online reference materials and schematics. Stay informed on current analog and digital circuitry including simulation tools.

REQUIRED KSA

1. Skill in design and fabrication of electronic circuits and components.
2. Skill using CAD/CAE systems for development and documentation of new designs.
3. Skill using a wide variety of electronic test instruments and appropriate hand tools for mechanical assembly and soldering and to bring new electronic equipment, as well as those that need repair or modification, to an operational state.
4. Skill using and interpreting results of electronic test equipment, such as oscilloscopes, signal generators, network analyzers, and data acquisition system. Familiarity with diagnostic software packages for analyzing data from electronics instrumentation.
5. Organizational and time management skills.
6. Interpersonal communication skills to work effectively in a diverse community.
7. Knowledge of safe work practices and ability to uphold those for self and others using the Physics & Astronomy Department electronics shop facilities.

PREFERRED KSA

1. Experience with low noise design, and electromagnetic interference tracking and elimination.
2. Experience applying surface mount technology, and a wide variety of soldering techniques.
3. Experience with high-frequency (>1GHz) design and with low-level (pA & nV) design.
4. Knowledge of chemicals, materials, and adhesives used in electronics.
5. Ability to analyze and repair undocumented electronic devices.