



<h1>POSITION DESCRIPTION</h1>

Department: College of Science, Technology, Engineering, and Mathematics / Physics
Position Title: Laboratory Technician II
Job Code: 1617
Time Base: 1.0
Position Number: 00006712
Union / Unit (if applicable): California State University Employees Union (CSUEU)/ Unit 9

Position Reports To: Associate Dean, CSTEM
Classification: Instructional Support Technician II
Range Code: 1
Exempt or Non-Exempt: Non-Exempt
Last Update: 10/29/2024

PURPOSE OF POSITION:

The Laboratory Technician II will provide comprehensive support to faculty in equipping and running the undergraduate instructional engineering laboratories, including researching and ordering scientific equipment and supplies, setting up instructional laboratory equipment, providing routine maintenance of equipment, designing and constructing laboratory apparatus, and assisting in the management of laboratory safety procedures.

The applicant should demonstrate a strong enthusiasm for self-learning and experimentation with the rapidly evolving technologies used in Electrical and Computer Engineering laboratories, including areas such as Electric Machines, Control Systems, Integrated Circuit Design, Hardware Description Languages, Communication Circuits, and more. This will include a laboratory-based curriculum for lower and upper-division engineering laboratory courses and student research projects. The Laboratory Technician II operates under the lead direction of the Department Chair and the direct supervision of the Associate Dean. The technician will receive the required instructions for lab preparations from the faculty with the approval of the department chair. The performance will be evaluated regularly by the Associate Dean, with input from faculty members to ensure their needs are met, and tasks are completed satisfactorily.

MAJOR RESPONSIBILITIES:

	<u>% OF TIME</u>
1. Assembling, testing, design, construction, and routine maintenance of equipment, and setting up equipment for instructional laboratories	55%
2. Training and providing lead direction to student assistants	20%
3. Researches and purchases scientific equipment and supplies	10%
4. Management and documentation of equipment, supplies, storage areas, and lab spaces	10%
5. Safety management	5%

LIST OF DUTIES FOR EACH MAJOR RESPONSIBILITY:

1. **Assembling, testing, design, construction, and routine maintenance of equipment, and setting up equipment for instructional laboratories**
 - Checks in new equipment, assembles it, tests it, and ensures its correct operation.
 - Performs routine inspections and tests on equipment to ensure its functionality.
 - Tests equipment reported as faulty.
 - Repairs equipment that is not working properly.
 - Works with faculty to determine needed equipment for demonstrations, instructional laboratories. May include research activities as time permits.
 - Determine specifications and develop plans for the construction of apparatus.
 - Use standard mechanical and electrical construction techniques to construct apparatus, install and test completed apparatus.
 - Checks equipment needed each week for the instructional laboratories to ensure its functionality.
 - Schedules the set up of the equipment for all instructional laboratories.
 - Ensures that the equipment is put out in a timely manner.
 - Inventories and stows all equipment promptly after use.

2. **Training and providing lead direction to student assistants**
 - Trains and assists student assistants in the safe and correct use of instructional laboratory equipment, including classroom demonstrations.
 - Provides lead direction to student assistants who help with equipment setup and breakdown for instructional laboratories.
 - Supports undergraduates in the use of sensitive experimental equipment for independent student research projects.

3. **Researches and purchases scientific equipment and supplies**
 - Advises faculty about needed equipment.
 - Provides information about laboratory equipment suppliers, equipment options, and requirements.
 - Advises faculty on scientific equipment options.
 - Researches and negotiates equipment pricing. Obtain quotes for purchases.
 - Submit requisitions for purchase orders.
 - Purchases equipment and supplies.
 - Maintain records of purchases.
 - Tracks the stock and use of laboratory supplies and schedules timely replenishment of the same.
4. **Management and documentation of equipment, supplies, storage areas, and lab spaces**
 - Develops and maintains database inventories of equipment and supplies.
 - Ensures the safe and secure storage of all equipment and supplies at all times.
 - Maintains documentation on the assembly and use of all equipment.
 - Maintains records of equipment manuals.
 - Inventories and stows all equipment promptly after use.
5. **Safety management**
 - Ensures the safe and secure storage of all equipment and supplies
 - Advises faculty on relevant hazards and safety procedures for equipment.
 - Responsible for the safe disposal and/or recycling of consumable items.
 - Work with the department faculty to write and maintain effective laboratory procedures on safe work practices, personal protective equipment uses, and other safety requirements.

PROVIDES LEAD DIRECTION OF OTHERS:

- Student Assistants

REQUIREMENTS OF POSITION:

1. **List certificates, licenses, or education required**
 - Equivalent to three years of experience providing instructional support services for a related unit or discipline, or in producing materials or supplies or equipment in a discipline related to the areas to which assigned;
 - **OR**
 - Equivalent of two years of college with 16 semester units in courses involving extensive use of materials, supplies, or equipment and in a discipline related to the area may be substituted for one year of the required experience;
 - **OR**
 - Equivalent of four years in college with 16 semester units in courses involving extensive use of materials, supplies, or equipment in a discipline related to the area may be substituted for two years of the required experience.
 - Associate's degree or higher in Electrical Engineering, Computer Engineering, or a related field preferred.
 - Applicants must successfully pass a hands-on exam to demonstrate their knowledge and skills in setting up laboratory experiments and performing accurate measurements in an Electrical Engineering lab environment.
 - Must successfully meet and pass a pre-employment medical examination and drug screen.
2. **Additional knowledge, skills, and abilities required for this position**
 - Knowledge of common principles, methods, and techniques related to electrical engineering labs
 - Knowledge of supplies and electronic scientific equipment
 - Demonstrated ability to learn to adjust and make minor repairs on scientific equipment
 - Demonstrated ability to operate scientific equipment and to interpret results
 - Demonstrated ability to plan activities and prepare schedules
 - Demonstrated ability to maintain computer-based inventory, data and prepare accurate reports (e.g., inventory)
 - Demonstrated ability to safely handle and dispose of hazardous materials as necessary
 - Demonstrated ability to comply with all appropriate safety regulations
 - Demonstrated ability to train and provide lead direction to student assistants
 - Effective organizational and planning skills for managing the laboratory equipment and storage areas
 - Effective oral and written communication skills for documenting the use of the equipment and training of laboratory personnel and communicating with faculty.
 - Knowledge of the equipment used in the wide range of courses offered by the department
 - Demonstrated ability to work in a diverse work setting
 - Demonstrated ability to work in a fast-paced environment and respond to frequent interruptions
 - Demonstrated ability to work with faculty to identify, source, and obtain sensitive scientific equipment in order to support faculty and students doing independent research projects or working in upper-division laboratories
 - Demonstrated ability to work with others to interact effectively with faculty, staff, and students
 - Demonstrated ability to work independently and meet schedules and deadlines.

- Knowledge of basic computer skills (Microsoft Office, Word, Excel, Email, Internet).
 - Knowledge of the safe and proper use of hand-operated workshop tools is essential for equipment assembly, testing, and repair.
3. **Machines, tools, equipment, and motor vehicles used in the performance of the duties**
- Electronic equipment repair tools (soldering iron, pliers, tweezers, anti-static device, heat gun, etc.)
 - Electronic test equipment (Digital Multimeter, Power Supply, Oscilloscope, Function Generator)
4. **Unique working conditions**
- Willingness to learn about and work with scientific equipment and applications. May be required to operate from a workspace located in the Electrical Engineering stockroom.
 - Regular office hours for customer interaction are Monday thru Friday.
Hours may vary, such as 8am-4:30pm or 11am-7:30pm, depending on the course schedule.
 - Must be able to lift up to 50 pounds.
 - Must be enrolled in the University's medical monitoring program.
5. **Other Employment Requirements**
- This position is subject to a background check including, but not limited to, employment verification, education verification, reference checks, and criminal record checks. Failure to satisfactorily complete the background check may affect the application status of applicants or continued employment of current CSU employees who apply for the position.
 - This position is a “designated position” in the California State University’s Conflict of Interest Code. The incumbent in this position is required to file Conflict of Interest forms subject to the regulations of the Fair Political Practices Commission. This position is required to file the Form 700 under the disclosure category: 2.
 - Must participate in required campus trainings including, but not limited to, Sexual Harassment Prevention training “EDU Supervisor: Anti-Harassment, Discrimination, Retaliation”; Information Security Awareness Training; and Sexual Violence Awareness and Prevention “EDU: Eliminate Campus Sexual Misconduct”.
 - Must successfully meet and pass a pre-employment medical examination and drug screen.
 - Must be enrolled in the University's medical monitoring program.

PURPOSE AND NATURE OF WORK RELATIONSHIPS:

Define working relationships with people on and off campus (other than supervisor or people supervised) with whom this employee interacts on a continuing basis and how often this interaction occurs.

Daily:

- The laboratory technician will work closely with all faculty members, teaching the instructional laboratories to ensure a safe environment is maintained in the labs at all times and that the equipment is used properly.
- The Laboratory Technician will support faculty and students in the upper-division laboratories and in independent research projects in the correct and safe use of sensitive scientific equipment
- The Laboratory Technician will construct and/or repair laboratory equipment and apparatus.

Weekly:

- The Laboratory Technician will set up and develop new laboratory activities and lecture demonstrations under the guidance of the faculty.

Monthly:

- The Laboratory Technician will work with faculty, departmental support staff, and Facilities Services to coordinate laboratory set-ups, repairs, and/or installations, report problems, or request supplies.
- The Technician will work with departmental support staff to coordinate budgeting, accounting, and purchasing of equipment and supplies.

Semi-annually/Annually:

- The Laboratory Technician will work with faculty, departmental support staff, and IITS to coordinate upgrades on the engineering hardware and software, including computer systems.
- The Laboratory Technician will work with departmental support staff and Materials Management to maintain updated inventories of space and equipment.
- The Laboratory Technician will work with departmental support staff and Risk Management to maintain updated inventories of hazardous materials.

PHYSICAL EFFORT:

Check the appropriate box for each of the following items which most accurately describes the extent of the specific activity performed by this employee on a daily basis.

	Number of hours/day				
	N/A	0-1	1-2	2-3	3+
1. Sitting				√	
2. Standing			√		
3. Walking			√		
4. Bending Over		√			
5. Crawling	√				
6. Climbing	√				
7. Reaching overhead		√			
8. Crouching		√			
9. Kneeling	√				
10. Balancing	√				
11. Pushing or pulling		√			
16. Driving cars, trucks, forklifts and other equipment					
17. Being around scientific equipment and machinery					
18. Walking on uneven ground					

	Number of hours/day				
	N/A	0-1	1-2	2-3	3+
12. Lifting or carrying					
A. 10 lbs or less			√		
B. 11 to 25 lbs		√			
C. 26 to 50 lbs		√			
D. 51 to 75 lbs	√				
E. 76 to 100 lbs	√				
F. Over 100 lbs	√				
13. Repetitive use of hands/arms	√				
14. Repetitive use of legs	√				
15. Eye/hand coordination				√	

Yes	No
	√
√	
	√

MENTAL EFFORT

	Number of hours/day				
	N/A	0-1	1-2	2-3	3+
1. Directing others		√			
2. Writing		√			
3. Using math/calculations		√			
4. Talking		√			
5. Working at various tempos		√			
6. Concentrating amid distractions			√		
7. Remembering names					√
8. Remembering details					√
9. Making decisions					√
10. Working rapidly			√		
11. Examining/observing details			√		
12. Discriminating colors		√			

ENVIRONMENTAL FACTORS

	Number of hours/day				
	N/A	0-1	1-2	2-3	3+
1. Inside					√
2. Outside	√				
3. Humid	√				
4. Hazards		√			
5. High places	√				
6. Hot	√				
7. Cold	√				
8. Dry	√				
9. Wet	√				
10. Change of temp	√				
11. Dirty	√				
12. Dusty	√				
13. Odors	√				
14. Noisy	√				
15. Working w/others			√		
16. Working around others				√	
17. Working alone			√		

SIGNATURES

The last sheet for any staff position description should contain the signature sheet. Signatures will include the incumbent's signature (if applicable) or new employee; the supervisor's signature and all pertinent administrative personnel.

Employee

Print Name: _____

Signature: _____

Date: _____

Appropriate Administrator (MPP)

Print Name: _____

Signature: _____

Date: _____

Dean/Department Head/Director/AVP (optional)

Print Name: _____

Signature: _____

Date: _____