



POSITION DESCRIPTION

Department:	Biomedical Engineering
Classification Title:	Equipment Technician II, Electro-Mechanical
Working Title:	
FLSA Status:	<input checked="" type="checkbox"/> Non-Exempt <input type="checkbox"/> Exempt
Incumbent:	

Position Summary

The Biomedical Engineering (BMED) Department is an academic department within the College of Engineering. The mission of the Biomedical Engineering Program is to educate our students for careers of service, leadership, and distinction in engineering or other fields by using a participatory, learn by doing, “hands-on” laboratory, projects and design centered approach. The department prepares students for careers in Biomedical Engineering (BMED) and a diversity of other careers offering a Bachelor of Science undergraduate degree that is largely a general approach to biomedical engineering, emphasizing hands-on learning experiences, and core competencies that can serve a wide variety of industries.

Under general supervision of the Biomedical Engineering Department Chair, this temporary position is responsible for managing and maintaining laboratory spaces and instruments, as well as supporting instructors with lab and student project activities. The incumbent is responsible for protecting, maintaining, troubleshooting, and repairing specialized equipment, as well as arranging equipment service visits, and maintaining precise equipment records. This position is responsible to ensure compliance with existing lab safety protocols, conduct safety training for students, and ensure a safe learning and work environment. The incumbent supports the maintenance and operation of specialized or custom equipment, sensors, and research systems to meet the specific needs of educational and research projects and coordinates the usage of shared lab resources between classes and research. The incumbent is responsible for placing equipment orders, handling installations, calibrations, and repairs, and provides guidance to students on lab and equipment use.

Department technical and instructional support staff in the College of Engineering are part of a broader instructional and equipment support team and work together collaboratively to innovate and develop best practices.

Duties and Responsibilities

The following examples illustrate typical work activities and are not meant to be all inclusive or restrictive:

Essential Job Functions

Daily

90%

1. Maintain, calibrate, service, troubleshoot, and repair specialized equipment in research and teaching laboratory spaces. Duties will require independent decisions on day-to-day operations and interpretation and application of policies, procedures, and standards.
2. Communicate and coordinate with vendors and specialized service technicians to keep laboratory test equipment and instruments safe, calibrated, and functioning properly. Maintain service, calibration, preventative maintenance schedules and historical records for field and laboratory test equipment and instrumentation.
3. Follow campus and CSU procurement processes and procedures including preparing documentation for purchase requisitions and reconciling procurement cards.

4. Assist with and support design and manufacturing of prototypes and unique equipment as needed to support research and individual projects. The scope of these prototypes varies greatly from mechanical, electro-mechanical, electronic, to specialized equipment.
5. Provide technical and safety related training to faculty, staff, and students on the safe operation and maintenance of departmental equipment. Ensure compliance with all lab, department, college, university, CSU, state, and federal safety policies.
6. Install, calibrate, maintain, troubleshoot, repair, and operate electromechanical, optical, and other specialized equipment used for research or individual student projects. Equipment includes scanning electron microscopes, laser scanning confocal and multiphoton microscope, rapid prototyping machines (e.g. fused-deposition modeling, three-dimensional printer, and laser cutter), electrospinner, surgical suite equipment, cell and tissue culture, microfabrication equipment, etc.
7. Test and develop plans, methods, and techniques for analyzing the location and extent of malfunctioning equipment.
8. Maintain continuity of department, college, and university safety programs. Implement or identify new safety needs as needed or under direction from the department chair.

Related Job Functions

As Needed

10%

1. Perform other job-related duties and special projects as assigned
2. Maintain currency in the knowledge and skills necessary to facilitate industry-leading solutions

Required Education, Experience, and Credentials

Education and Experience:

- Equivalent to two years of journey-level or skilled experience in the maintenance, repair, and operation of scientific or technical equipment in the specialty area to which assigned such as mechanical, electromechanical, electronics or in the specialized category including construction and fabrication and some precision work or requiring trade or craft skills working with a variety of unique materials.
- Equivalent to two years of semi-skilled experience maintaining and repairing scientific or technical equipment or related experience in the type of equipment to which assigned as part of instructional support activities may be substituted for one year of the required experience.
- Equivalent to two years of trade school or technical arts training with specialization in the type of equipment repair to which assigned, completion of an apprenticeship program, or completion of a full military specialization in the required type of equipment maintenance and repair for one year of the required experience.

Licenses, Certificates, Credentials:

- N/A

Required Skills, Knowledge, and Abilities

1. Ability to design, fabricate, operate, and assemble prototypes and unique equipment, typically one-offs for research applications and independent projects. The scope of these prototypes varies greatly from mechanical, electro-mechanical, electronic, to specialized equipment.
2. Ability to apply previous experience and knowledge to design of new applications.
3. Knowledgeable and experienced in the use, design, and maintenance of complex, specialized equipment, such as for SEM, confocal and multiphoton microscopy, cell and tissue culture, etc.
4. Knowledgeable and experienced in the use of basic hand tools to advanced machining methods, CNC controllers and machine tools, rapid prototyping machines, welding processes, sheet metal

- fabrication, and other fabricating processes on materials such as wood, plastics, composites, and metals.
5. Knowledgeable and experienced in electrical systems and electronic circuits (analog and digital), hydraulics, pneumatics, pumps, piping. Installation and calibration of instrumentation sensors and data acquisition.
 6. Ability to create, read, and understand 2D and 3D solid models in CAD. Ability to use CAM software.
 7. Ability to perform engineering calculations to support design and other work.
 8. Ability to read and understand wiring schematics, blueprints, and equipment manuals.
 9. Ability to safely operate a variety of manufacturing equipment.
 10. Ability to ensure a safe working environment, compliance with university, state, and federal safety guidelines, maintain safety records, and conduct safety inspections.
 11. Demonstrated customer service experience requiring a very high level of diplomacy and professionalism.
 12. Ability to use tact and diplomacy to effectively handle a broad range of high level and sensitive interpersonal situations with diverse personalities, and to respond appropriately to conflicts and problems.
 13. Ability to initiate, establish, and foster communication and teamwork by maintaining a positive, cooperative, productive work atmosphere in and outside the University with the ability to establish and maintain effective working relationships within a diverse population and with those from various cultural backgrounds.
 14. Excellent communication skills; ability to effectively communicate information in a clear and understandable manner, both verbally and in writing.
 15. Thorough knowledge of English grammar, spelling and punctuation.
 16. Ability to interpret, communicate and apply policies and procedures
 17. Demonstrated ability to maintain a high degree of confidentiality.
 18. Excellent organizational and time management skills with the ability to set own priorities to coordinate multiple assignments with fluctuating and time-sensitive deadlines.
 19. Excellent computer skills and proficiency with a variety of computer applications including word-processing, spreadsheets, databases, on-line systems, Internet as well as online calendaring and email.
 20. Working knowledge of or ability to quickly learn University infrastructure, policies and procedures.

Preferred Skills and Experience

- Demonstrated skills in an institutional/educational environment utilizing a customer-oriented and service-centered attitude.

Special Conditions

- Must be willing to travel and attend training programs off-site for occasional professional development.
- Must be able to work overtime, occasional holidays, and adjust working hours to meet special jobs. May be called back periodically to perform work as needed on an emergency basis.
- The person holding this position is considered a 'mandated reporter' under the California Child Abuse and Neglect Reporting Act and is required to comply with the requirements set forth in CSU Executive Order 1083 as a condition of employment.
- Must be able to successfully pass a pre-employment background/fingerprint check.
- This position classification has been defined as non-exempt and is subject to overtime provisions of the Fair Labor Standards Act (FLSA).

INCUMBENT: I have read this position description and understand its contents.

INCUMBENT NAME SIGNATURE DATE

SUPERVISOR: I certify that all statements on this form are complete and accurate.

IMMEDIATE SUPERVISOR NAME AND TITLE SIGNATURE DATE

DEPARTMENT HEAD: I certify that all statements on this form are complete and accurate.

DEPARTMENT HEAD NAME AND TITLE SIGNATURE DATE

HUMAN RESOURCES USE ONLY

Employee ID#:	_____	REQUEST FOR:	CLASSIFICATION INFORMATION
Position Number:	_____	<input type="checkbox"/> Update Review for File	Classification Title: ET II
FTE:	_____	<input type="checkbox"/> Classification Review	Class Code/Range: 7012/1
<input type="checkbox"/> Permanent		<input type="checkbox"/> New Position Recruitment	CBID: R09
<input type="checkbox"/> Temporary		<input type="checkbox"/> Replacement Recruitment	MPP Job Code: N/A
<input type="checkbox"/> COI Position			Classifier Initials: LD
Recruitment Number:		Date:	8/9/24