

## UW HEALTH JOB DESCRIPTION

### Biomedical Engineering Tech II

Job Code: 510007	FLSA Status: Non-exempt	Mgt. Approval: J. Layng	Date: May 2024
Department: Supply Chain – Healthcare Technology Mgt		HR Approval: S. Whitlock	Date: May 2024

### JOB SUMMARY

The Biomedical Engineering Technician II maintains clinical equipment through the effective use of the UW Health Medical Equipment Management Plan. Performs a variety of tasks associated with the installation, maintenance, calibration and repair of biomedical equipment with minimal supervision.

Positions at this level are responsible for providing primary support in troubleshooting and repairing sophisticated medical equipment and systems. Servicing this equipment requires considerable knowledge and skill in configuring and troubleshooting computer operating systems and networks.

Work is performed independently in various settings including critical patient care areas such as operating rooms and intensive care units as well as bench and in-shop locations. This position keeps accurate records of repairs made and follows up with customers on work performed or scheduled. This position provides training to clinical operators on the correct setup, calibration, and operation of patient care equipment.

This position requires the incumbent to be on call during some evenings, weekends and holidays as needed, based upon assigned location and Department needs.

An understanding of physiology and medical terminology is necessary in order to communicate with clinical staff on a day-to-day basis. This position may be called upon to evaluate prototypes or new equipment (with little or no printed information available) to ensure the safety of patients and staff in the use and operation of various types of medical equipment.

### MAJOR RESPONSIBILITIES

- Diagnose defective medical equipment and implement repairs without direct supervision in both shop and critical care settings including operating rooms, trauma units, emergency rooms, and various other patient care areas.
- Keep accurate records of all maintenance activities performed on assigned medical equipment and update the department database of this record of service, completely and promptly.
- Perform and record preventive maintenance of assigned equipment through periodic performance checks and measurements based on the UW Health Medical Equipment Management Plan.
- Have a working knowledge of all applicable codes and standards for maintaining medical equipment including those issued by The Joint Commission and other accrediting agencies.
- Maintain technical skills and be aware of emerging trends in Healthcare Technology Management by periodically attending seminars and reading relevant professional material.
- Operate sophisticated calibration and test equipment.
- Repair/calibrate life support and other critical medical equipment and systems such as but not limited to the following: ventricular assist devices, anesthesia machines, mechanical ventilators, electrosurgical units, physiologic patient monitoring equipment, ECG and EEG equipment, Echo vascular ultrasounds, hypothermia units, blood pressure monitors, defibrillators, adult and pediatric heart catheterization lab equipment, electro-physiology lab equipment, mass spectrometer based anesthesia gas analysis system, hemodialysis and peritoneal dialysis systems, lasers, computerized ECG stress test systems, volumetric infusion pumps, diagnostic ultrasound, and holter systems.
- Install and maintain various devices used to interface critical medical equipment data into the UW Health electronic medical record system (EPIC)
- Ensure urgent device corrections, and equipment recalls are acted upon in a timely manner to ensure safety of patients, visitors, and staff.
- Ensure medical equipment involved in or suspected to be involved with adverse patient interactions is processed in accordance with UW Health policy.
- Perform repairs and configuration updates to the nurse call system / network, including interfaces with middleware, ADT and alarm notification servers and equipment.
- Perform repairs and configuration of critical care patient monitoring computer systems; central stations, displays, database servers, enhanced web servers, ADT interface servers, alarm prioritizing and routing servers.
- Coordinate corrective maintenance on selected critical communication systems including emergency room radios, fire / security distributed antenna systems as well as long range and over-head paging systems.
- Perform and coordinate repairs and configuration of non-invasive cardiology database management and acquisition system including ECG stress testing systems, diagnostic ultrasound, and PACS interfacing equipment.
- Maintain and configure medical equipment alarm notification equipment, interfaces, and systems.
- Maintain and configure electronic ICU servers and associated network equipment.
- Perform repairs and configuration of data capture devices that interface clinical diagnostic and treatment equipment to institutional medical recording and data acquisition systems.

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- Monitor incoming work orders, prioritize work based on criticality and accurately document all work in the department's computerized maintenance management system (CMMS).
- Provide outstanding customer service. Contact department customers and provide device repair status and estimated time of return. Resolve customer complaints in a diplomatic and professional manner.
- Provide guidance to clinical users on proper use and care for diagnostic, treatment and monitoring equipment.
- Demonstrate correct setup, calibration, and operation of patient care equipment to clinical staff as required.
- Assist in the installation of medical equipment and systems by collaborating with clinical users in the selection of proper equipment for their needs, determining required infrastructure additions or changes, recommending mounting locations, and working with contractors to ensure proper equipment installation, cable routing, and labeling.
- Attend OEM training sessions to obtain required equipment certifications and credentialing to perform regulated repair and maintenance of selected medical equipment and systems
- Provide direction, assistance and give feedback to department interns on various equipment repair activities and procedures when requested.

**ALL DUTIES AND REQUIREMENTS MUST BE PERFORMED CONSISTENT WITH THE UW HEALTH PERFORMANCE STANDARDS.**

### JOB REQUIREMENTS

Education	Minimum	Associate's degree in Electronics, Biomedical Engineering, or related field. Two (2) years of related experience would be considered in lieu of degree in addition to experience below.
	Preferred	Bachelor's degree in Biomedical Engineering.
Work Experience	Minimum	One (1) year experience working with biomedical, electrical, electronics, IT, or mechanical equipment.
	Preferred	Two (2) years' previous experience as Biomedical Engineering Technician or electronics related technical field experience.
Licenses & Certifications	Minimum	Valid driver's license in the person's state of residence. <ul style="list-style-type: none"> <li>• Must be 21 years of age or have three (3) years of driving experience to operate a Patient/Visitor Vehicle or UW Health Vehicle other than a golf cart or utility terrain vehicle</li> </ul>
	Preferred	OEM or computer system certifications applicable to UW Health.
Required Skills, Knowledge, and Abilities		<ul style="list-style-type: none"> <li>• Thorough knowledge of electronic theory including advanced digital systems.</li> <li>• Ability to troubleshoot and repair failures in medical equipment.</li> <li>• Thorough knowledge of sophisticated electronic test equipment and applications.</li> <li>• Knowledge of physiological and medical terminology.</li> <li>• Ability to understand and follow established preventive maintenance procedures.</li> <li>• Ability to maintain reports utilizing a computerized maintenance management system (CMMS)</li> <li>• Basic knowledge of IT (Information Technology) terminology, setup, and configuration.</li> <li>• Strong customer service skills.</li> <li>• Ability to diagnose and resolve problems over the telephone using unskilled non-technical or clinical staff for assistance.</li> </ul>

### AGE SPECIFIC COMPETENCY (Clinical jobs only)

Identify age-specific competencies for direct and indirect patient care providers who regularly assess, manage and treat patients.

**Instructions:** Indicate the age groups of patients served either by direct or indirect patient care by checking the appropriate boxes below. Next,

<input type="checkbox"/>	Infants (Birth – 11 months)	<input type="checkbox"/>	Adolescent (13 – 19 years)
<input type="checkbox"/>	Toddlers (1 – 3 years)	<input type="checkbox"/>	Young Adult (20 – 40 years)
<input type="checkbox"/>	Preschool (4 – 5 years)	<input type="checkbox"/>	Middle Adult (41 – 65 years)
<input type="checkbox"/>	School Age (6 – 12 years)	<input type="checkbox"/>	Older Adult (Over 65 years)

### JOB FUNCTIONS

Review the employee's job description and identify each essential function that is performed differently based on the age group of the patient.

### PHYSICAL REQUIREMENTS

**Indicate the appropriate physical requirements of this job in the course of a shift.** *Note: reasonable accommodations may be made available for individuals with disabilities to perform the essential functions of this position.*

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Physical Demand Level		Occasional Up to 33% of the time	Frequent 34%-66% of the time	Constant 67%-100% of the time
	<b>Sedentary:</b> Ability to lift up to 10 pounds maximum and occasionally lifting and/or carrying such articles as dockets, ledgers and small tools. Although a sedentary job is defined as one, which involves sitting, a certain amount of walking and standing is often necessary in carrying out job duties. Jobs are sedentary if walking and standing are required only occasionally and other sedentary criteria are met.	Up to 10#	Negligible	Negligible
	<b>Light:</b> Ability to lift up to 20 pounds maximum with frequent lifting and/or carrying of objects weighing up to 10 pounds. Even though the weight lifted may only be a negligible amount, a job is in this category when it requires walking or standing to a significant degree.	Up to 20#	Up to 10# or requires significant walking or standing, or requires pushing/pulling of arm/leg controls	Negligible or constant push/pull of items of negligible weight
X	<b>Medium:</b> Ability to lift up to 50 pounds maximum with frequent lifting/and or carrying objects weighing up to 25 pounds.	20-50#	10-25#	Negligible-10#
	<b>Heavy:</b> Ability to lift up to 100 pounds maximum with frequent lifting and/or carrying objects weighing up to 50 pounds.	50-100#	25-50#	10-20#
	<b>Very Heavy:</b> Ability to lift over 100 pounds with frequent lifting and/or carrying objects weighing over 50 pounds.	Over 100#	Over 50#	Over 20#
<b>Other</b> - list any other physical requirements or bona fide occupational qualifications not indicated above:				

Note: The purpose of this document is to describe the general nature and level of work performed by personnel so classified; it is not intended to serve as an inclusive list of all responsibilities associated with this position.