



UNION JOB DESCRIPTION

JD5431

JOB TITLE:	Biomedical Engineering Technologist - Radiology Service	JOB DESCRIPTION NO.:	5431
CLASSIFICATION:	Radiology Service Technologist P1	GRID/PAY LEVEL:	H-K-P1
COLLECTIVE AGREEMENT:	Health Science Professionals	HSCIS NO.:	46001
UNION:	HSA	JOB/CLASS CODE:	46001
PROGRAM/DEPARTMENT:	Operations & Support Services / Biomedical Engineering	BENCHMARKS (If Applicable):	
REPORTING TO:	Supervisor, Manager or designate		
FACILITY/SITE:	North Island Hospital (Comox Valley Campus; Campbell River and District); Royal Jubilee Hospital; Victoria General Hospital; Nanaimo Regional General Hospital; Cowichan District Hospital		

JOB SUMMARY:

In accordance with the Vision, Purpose, and Values, and strategic direction of the Vancouver Island Health Authority (Island Health), patient and staff safety is a priority and a responsibility shared by everyone; as such, the requirement to continuously improve quality and safety is inherent in all aspects of this position.

Reporting to the Supervisor or designate, the Biomedical Engineering Technologist - Radiology Service inspects, tests, maintains, and performs difficult repairs on medical imaging and biomedical equipment with a focus on specialized complex diagnostic high voltage and/or radiation-emitting medical imaging equipment such as Computed Tomography (CT), Magnetic Resonance Imaging (MRI), angiography, and nuclear medicine systems.

Utilizes advanced Biomedical Engineering theory and knowledge to provide technical support, guidance, and education to colleagues and clinical staff as required. Reviews, tracks and makes recommendations on risk mitigation and quality control activities related to high voltage and/or radiation-emitting medical imaging equipment.

Travel is a requirement of this position and travel to local, national and international locations may be required by the Employer to undertake training. Transportation arrangements must meet the operational requirements of Island Health in accordance with the service assignment and may require the use of a personal vehicle. Participates in employer-approved training opportunities and provides mentorship and training of Biomedical Engineering Technologists - Radiology Service Apprentices, to help them build skills, knowledge and experience in the diagnosis, repair and maintenance of high voltage, complex radiology equipment.

TYPICAL DUTIES AND RESPONSIBILITIES:

1. Inspects, diagnoses malfunctions and performs difficult repairs on a full range of biomedical equipment and highly specialized complex medical imaging equipment including CT, MRI, angiographic or nuclear medicine systems. Tests, installs, and calibrates this specialized complex equipment according to manufacturer specifications.
2. Performs scheduled preventive maintenance and corrects problems to ensure manufacturer specifications, warranty requirements, and hospital safety and performance standards are met. Co-ordinates preventive maintenance schedules with the client departments as required.
3. Monitors radiation levels of equipment using a radiation meter to ensure levels are within currently established limits. Completes and remits forms to appropriate safety branches and/or regulatory bodies as required. Maintains and initiates the calibration of test equipment.

4. Performs acceptance tests and installs new medical imaging, biomedical and electronic equipment in accordance with departmental procedures. Oversees and co-ordinates the work activities of designated Technical Representatives from vendors performing duties on the medical imaging equipment including CT, MRI, angiography or nuclear medicine systems. This may involve scheduling activities, establishing priorities, providing orientation, facilitating workplace solutions with other department personnel, and monitoring activities to ensure department standards are met and safety procedures are followed.
5. Provides technical advice, trains and mentors clinical staff, students, and biomedical engineering staff regarding the use and care of medical imaging and biomedical equipment. Prepares appropriate training materials, audio/visual aids and writes technical procedures as required to assist with any training. Monitors learner's progress, ensures policies and procedures are respected and provides feedback regarding a learner's progress in achieving established standards of practice. Notifies Supervisor of any performance problems/issues.
6. Participates, inspects, and responds to incidents or device recalls/alerts involving biomedical equipment. Provides input into the development and implementation of recommendations to prevent the recurrence of such incidents. Identifies hazards and submits hazard reports as required when deficiencies are observed. Participates in the development and modification of Preventive Maintenance procedures as required.
7. Researches and provides input into the modification, redesign and/or fabrication of biomedical and electronic equipment, as required, to improve the quality of patient care or to reduce costs.
8. Maintains service reports by recording details of repair, maintenance and calibration and other related information in accordance with department policies and procedures.
9. Uses computer-based information and published sources of product and technical data to determine equipment service and parts supply options.
10. Reviews and evaluates vendor education resources and skills training to identify learning opportunities for staff that enhance service and support ongoing professional development.
11. Communicates with manufacturers, distributors, other institutions and colleagues regarding the support of biomedical and electronic equipment and to keep abreast of current technology.
12. Attends and presents in-service education, training, demonstrations, and other technical training/education in radiation safety and imaging basics as required by the employer. Maintains an understanding of clinical procedures and practices involving medical devices and related technology such as sterile techniques and operating room protocols to ensure the ability to interpret customer needs.
13. Participates in the selection, evaluation and installation of medical equipment by assisting with the development of the technical specifications, and evaluating equipment for technical acceptance, safety, and serviceability. Works in conjunction with the vendor, the clinical area and support departments to plan and implement the installation of equipment.
14. Operates a motor vehicle such as a car to visit other regional sites to install, repair, and/or modify related equipment.
15. Performs other related duties as required and assigned by the Manager and/or designate.

QUALIFICATIONS:

Education, Training And Experience

- Graduation from a recognized program in Biomedical Engineering Technology is required; and
- A minimum of four (4) years recent, related technical experience spent in the field of Biomedical Engineering on the maintenance/repair of medical imaging and diagnostic equipment (including relevant vendor-provided training), or an equivalent combination of education, training, and experience may be considered; and
- Eligibility for certification with the Applied Science Technologists and Technicians of British Columbia as an Applied Science Technologist; and
- Valid BC Driver's license.

Skills And Abilities

- Comprehensive knowledge of the operating and maintenance practices and procedures for a wide range of medical technology, radiology equipment and complex high-voltage and/or radiation-emitting diagnostic and interventional equipment such as MRI, CT, Nuclear Medicine and Angiography equipment.
- Physical ability to carry out the duties of the position.
- Ability to operate related test equipment and tools.
- Ability to organize work.
- Demonstrated ability to collaborate in a team environment, and deal courteously with others in stressful situations.
- Ability to communicate effectively both verbally and in writing.
- Current computer troubleshooting and networking knowledge and proven ability to repair and resolve problems with complex medical technology.
- Ability to interpret system diagrams and schematics found in the service manuals of complex medical technology.
- Proficient knowledge in radiation safety, high voltage hazards and mechanical structures typically found in the repair/maintenance of radiology equipment.
- Demonstrated ability to work independently when servicing biomedical equipment and to address issues with analytical reasoning and problem solving skills.
- Demonstrated ability to develop educational materials and teach, coach and deal with others effectively in a supportive and positive manner.