**Title: Biomedical Engineering Technologist**

**Job description**

Biomedical Engineers apply their knowledge of physical science and engineering in an effort to design and develop life-support devices and other medical equipment that can assist health care professionals in improving the quality of life of patients. They plan and conduct research concerning biological, psychological, behavioral, and other life systems that affect the health of patients. Biomedical engineers develop mathematical models and computer simulations in order to better understand the life processes that affect our health.

The Biomedical Engineering Technologist is responsible to ensure that all patient care and medical equipment is operating to institutional, national and manufacturer specifications. This involves problem resolution; preventive maintenance; calibration and repair of all medical devices and equipment; training and development and maintaining all documentation as it relates to repairs. They may also specialize in repairing equipment for a specific use: for example, x-ray, laser or patient monitoring machines.

As a Biomedical Engineering Technologist you will:
- Ensure that all patient care and medical equipment in operating rooms, intensive care, clinical labs, including therapeutic and diagnostic clinics.
- Provide preventive maintenance to medical care equipment in a safe, self-directed and timely manner.
- Act as preceptors to physicians, nurses and technical staff concerning operation of medical equipment on a formal and informal basis, including technical support during surgeries and medical procedures.
- Work with engineers and researchers to design and fabricate specialized devices for use in the clinical and research settings.
- Prepare documentation and maintain records pertaining to all repairs, replacement parts, calibrations and modifications of medical equipment.
- Gather and provide first response information on medical equipment related issues involved in patient occurrence reports.
- Identify aging and obsolete patient care equipment to departmental managers and the Clinical Engineer. Provide supporting documentation for the assessment, justification and selection of new devices while realizing fiscal responsibility.

**Work environment**

The majority of biomedical engineers work in medical, academic, industrial, and governmental research laboratories. Other employment opportunities exist in hospitals and undersea and space programs. These highly trained professions usually work 40-hours a week and face a minimal amount of workplace hazards.

**Education**

Minimum Education required is 2 years post secondary Electronics Engineering Technology Diploma.

**Required High School Courses:**

- Biology
- Chemistry
- Physics
- Algebra
- Calculus
- Geometry
- English
- Math
- Science
Personal characteristics and skills

- Strong interest in engineering and medicine.
- The ability to think analytically and solve problems.
- An aptitude for science and mathematics.
- The ability to visualize complex processes and equipment.
- Good oral and written communication skills.
- Creativity and persistence.
- A willingness to improve their knowledge and skills on an ongoing basis.
- The ability to work effectively with people from various disciplines and educational backgrounds.

They should also enjoy:

- Synthesizing information to conduct research and develop new instruments, equipment and systems.
- Performing tasks that require precision.
- Consulting with and supervising others.

Employment and earning potential

- Working in Canada
- Capital Health $ 43,932 -58,801 per year

More Information

- The Canadian Medical and Biological Engineering Society
- The Canadian Board of Examiners for Biomedical Engineering and Dialysis Technologists and Technicians
- Biomedical Engineering Society