**UNIVERSITY OF VICTORIA**
**CUPE LOCAL 951 POSITION DESCRIPTION**

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<tr>
<th>JOB:</th>
<th>Technician PB12B</th>
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<tr>
<td><strong>TITLE:</strong></td>
<td>Scientific Equipment Service Technician</td>
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<td>DEPARTMENT:</td>
<td>Biochemistry &amp; Microbiology</td>
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<td>POSITION NO:</td>
<td>992804, 997381</td>
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<tr>
<td>SUPERVISOR:</td>
<td>Technical Supervisor PB14B</td>
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<td>LAST UPDATED:</td>
<td>November 2018</td>
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**SUMMARY:**
The Biotechnical Support Centre (BSC) in the Department of Biochemistry & Microbiology provides support to the teaching and research programs in the Faculty of Science as well as the Aquatics unit and the Animal Care Facility. As part of the BSC team, this position maintains, calibrates, repairs and modifies a diverse array of electronic, electro-mechanical, hydro-mechanical and mechanical scientific laboratory instrumentation and equipment. Responsibilities include, but are not limited to, diagnosing and calibrating existing inventory; reviewing manufacturers’ specifications, schematics and costs for components; design and fabrication of specialized teaching and research equipment, in consultation with the Technical Supervisor; consulting with faculty, students and staff to determine instrumentation and equipment needs and specifications to design and fabricate specialized detailed mechanical systems and electrical circuit designs, and other duties of similar scope and complexity. The position will evolve as required to help accomplish the goals of the BSC.

**MAJOR RESPONSIBILITIES AND DUTIES:**

1. **Responsibility:**
   Equipment inspection, installation, maintenance, modification, repair and disposal

   **Duties:**
   - Performing inspections and installation of newly acquired equipment.
   - Maintaining, diagnosing, repairing and calibrating a diverse array of electronic, electro-mechanical, hydro-mechanical and mechanical scientific equipment and instruments employed in teaching, research and the central infrastructure.
   - Configuring hardware and software systems.
   - Providing technical advice to students, staff and faculty regarding circuitry design and technical details of circuit operation.
   - Preparing for and co-ordinating the disposal of redundant teaching or research equipment.
   - Performing various duties for maintenance of Biotechnical Support Centre work unit.
2. **Responsibility:**
Designs and fabricates specialized teaching and research equipment, in consultation with the Technical Supervisor

**Duties:**
- Consulting with, and advising, faculty, students and staff regarding instrumentation and equipment needs, specifications and capabilities.
- Designing specifications and fabricating specialized detailed mechanical systems and electrical circuit designs for teaching and research equipment, using tools of the trade, while adhering to safety regulations.
- Preparing and presenting cost estimates pertaining to the construction of equipment.
- Testing the functionality of new equipment and advising faculty, students and staff on the technical and functional aspects of equipment in order to promote its safe and efficient use.
- Documenting project information to ensure that BSC correctly charges its users for materials and labour when such services are provided.

3. **Responsibility:**
Purchasing and acquisition

**Duties:**
- Reviewing manufacturers' specifications, design diagrams or schematics, component costs and recommending specific equipment models and/or suppliers to BSC clients.
- Sourcing, ordering and receiving components or materials required for the construction, service and/or repair of specialized mechanical systems and electrical equipment or to replenish BSC general inventory stocks.
- Coordinating the acquisition of fabrication, maintenance and repair services, from an array of on campus and external service providers, on the behalf of the BSC user group.
- Coordinating the delivery of warranty repairs, if applicable, on the behalf of the BSC user group.

4. **Responsibility:**
Assists in the maintenance of the Aquatic facility, the Animal Care facility, and all communal department equipment and systems.

**Duties:**
- Ensuring an uninterrupted supply of critical consumables and/or service components for the facilities.
- Monitoring system functions and performing control system calibrations for the Aquatic Facility, the Animal Care Facility and the water purification system.
- Monitoring and troubleshooting DDC Automation Systems required for the control of pumps, levels, flow and temperature.
- Testing and service of reverse osmosis and deionized water systems that serve numerous users and departments.
- Assisting in the service of industrial washers, autoclaves, air handling and vacuum systems.
- Ensuring the reliability of the Petch Building central water purification system that serves numerous User Departments.
- Ensuring the reliability of Departmental photographic, imaging and radiographic instrumentation.
• Assisting in the response to instrument or system failure alarms, as part of the BSC emergency response team.

5. **Responsibility:**
   Training of User Groups

**Duties:**
- Providing technical advice to students, staff and faculty regarding safe and proper operation of sophisticated technical instrumentation.
- Maintaining standards of care, and usage, of scientific equipment in a constantly changing user group by training users (research assistants, graduate and undergraduate students).
- Assisting in the administration of the department’s safety policies and procedures.

6. **Responsibility:**
   General and/or unspecified duties

**Duties:**
- Performing other duties of similar scope and complexity.
- Adapting to changing priorities, scope and technologies as required.
- Duties and proficiencies of the technician will be similar to skilled craft or trades persons.

**REQUIRED QUALIFICATIONS:**
Identify the qualifications required to perform the job. These should be directly related to the work and not to the education and experience level of the current incumbent.

**Skills:**

**Task related:**
- Inquisitive, ability to think critically, with a strong motivation to solve problems.
- A strong self-starter with attention to detail.
- Strong troubleshooting skills.
- Good logical deductive reasoning abilities, able to evaluate situations and make critical decisions.
- Able to visualize complex processes and equipment.
- Good fine motor skills and excellent mechanical aptitude.
- Able to skillfully operate hand and power tools, including proficient soldering skills.
- Colour vision.

**Communication and interpersonal:**
- Excellent interpersonal skills and a service oriented attitude.
- Able to work effectively as part of a dynamic team; with people from various disciplines, educational backgrounds; divergent personality types and English language proficiencies.
- Strong oral and written communication skills.
- Able to consult, seek assistance, accept advice and feedback from senior technicians.
- Able to prepare documentation, maintain records and keep detailed notes pertaining to repairs, communication with vendors, replacement parts, calibrations and modifications of scientific and related equipment.
**Personal attributes:**
- Inquisitive, creative, persistent and patient.
- A desire to improve knowledge and skills on an ongoing basis and keep up with new technologies.
- Able to remain calm under pressure, during urgent situations and be able to cope with shifting priorities.
- Able to handle stress of meeting deadlines and goals.
- Resourceful and able to work independently with minimal supervision.
- Able to work with constant disruptions and distractions, while still being able to accomplish required tasks and assignments

**7. Required Specialized Knowledge/Education:**
- Graduation from a recognized technical college, institute or equivalent, specializing in biomedical technology, electronics, direct digital control (DDC), or similar.
- Able to read and understand schematic, wiring or technical diagrams and instructions.
- Knowledge and experience in a variety of disciplines for the purpose of troubleshooting and repairing devices of electrical, electronic, electro-mechanical, hydro-mechanical, mechanical, and/or chemical nature.
- Extensive hands-on experience in the area of troubleshooting, repair or fabrication.
- Knowledge of hand and power tools and test equipment used in electronics or mechanical repairs.
- A working practical knowledge of building electrical, plumbing and mechanical systems.
- Computer literacy and proficiency commensurate with a technical support position including detailed PC hardware knowledge, along with solid MS Windows operating system software understanding.
- A broad conceptual understanding of biological sciences and physics principles would be very beneficial.

**Experience:**
Experience with the repair and maintenance of assorted modern scientific instrumentation.
A minimum of three years of experience relevant fields.

**Other information:**
This position may be required to respond to emergency call-outs when equipment malfunction or related alarms require attention.

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<td>Supervisor’s Signature:</td>
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