**Department of Human Resources**

**OPSEU Job Description**

**Job Title:** Electrical & Mechanical Technician

**Job Number:** SB-060

**NOC:** 9241

**Band:** 10

**Department:** Physical Resources Department

**Supervisor Title:** Manager, Mechanical & Electrical Maintenance

**Last Reviewed:** March 1, 2016

**Job Purpose**

Provides a full range of mechanical, electrical and related trades’ services for a wide assortment of building operating equipment throughout the University. The range of equipment includes heating, ventilation, air conditioning, natural gas, steam boilers, pneumatics, hydraulics, autoclaves, electrical, kitchen, plumbing, lighting, BSL III lab, fire safety, and specialized electronic controls. This position requires an in-depth knowledge of all building systems and equipment and current knowledge of provincial and local building, plumbing and electrical codes. Acts as a source of knowledge and advice about buildings, systems and equipment to other Electrical & Mechanical Technicians and Physical Resources management.

**Key Activities**

1. Investigate and resolve heating, ventilation, air conditioning, lighting, power, fire safety and plumbing complaints by investigating the source of the problem, be it local or system wide, and either correcting the problems or advising a course of action to correct the problem, in order to provide an environment conducive to living, learning and working for all members of the University community.
2. Share responsibility for 24 hour a day standby for emergency call-ins and follow-up from call-ins, by being prepared to return to work on a moment's notice after normal hours, to provide around-the-clock emergency service and protection of the University's facilities.
3. Monitors, adjusts, reschedules, by central computer, building environmental and complex laboratory control systems (including BSL III laboratory) and field checks relating to heating, cooling, domestic hot water, ventilation, pumping and digital control panels to minimize the likelihood of comfort complaints and ensure the effective use of energy.
4. Reschedule and reset heating, cooling, ventilation systems using room bookings information provided by staff outside the department.
5. Troubleshoot problems in the electrical, plumbing, mechanical, fire safety, heating, ventilation, air conditioning, natural gas and building automation system field hardware systems, using in depth knowledge of our systems and fields of expertise to ensure a continuous high level of building service.
6. Advise/assist/liaise/direct contractors performing maintenance and installation work at all University sites by examining blue prints, providing advice on aspects of the work, and providing liaison with affected building occupants, to facilitate maintenance and repair of University mechanical/electrical systems.
7. Carry out installation of various building service equipment throughout a wide range of University buildings at various locations, including building automation system hardware, using trade skills and knowledge and adhering to provincial codes, to improve the level of building services available to University residents/occupants.
8. Assist in developing preventative maintenance program's on mechanical and electrical systems in new buildings and systems, including revisions to existing routines, to ensure maximum service life.
9. Perform preventative maintenance tasks and repairs on a wide range of building service equipment, heating, ventilation and air conditioning, plumbing, electrical, mechanical, natural gas, kitchen, hydraulics and pneumatics, autoclaves, steam boilers, fire safety and the BSL III lab using appropriate manuals, tools, equipment and field experience.
10. Provide advice and direction in the selection, installation and services for equipment and devices used for research and building operations using technical knowledge of available building services.
11. Fabricate metal structures, fixtures, brackets and guards using Oxy-Acetylene torches, ARC and MIG welding and other metal working equipment.
12. Regularly check heating, cooling, ventilation, fluid motion and domestic hot water systems in all buildings throughout the main campus and off campus facilities, adjusting for seasonal changes to ensure that systems are working reliably.
13. Maintain and ensure proper operation of LEEDS building components and equipment.

**Education**

Secondary School Grade 12.

Provincial trade license certificate of qualification.

Provincial Trade Certificate of Apprenticeship

**Experience Required**

Four to six years of directly related trade experience.

Must hold and maintain a valid Ontario Driver’s License – Class G Minimum

**Responsibility for the Work of Others**

Direct Responsibility for the Work of Others:

* After normal operating hours, on Holidays and weekends the duty mechanic on call assumes the responsibility of supervisor when called in for an emergency.

Indirect Responsibility for the Work of Others:

* Students - employed through the summer, direct their work on a daily basis
* Contractors - exchange information, guide them through tasks
* College Maintenance workers/Porters - coordinate their work
* E&M Technician Assistants - coordinate their work on specific tasks, where assistance is required
* Other internal tradespeople - coordinate their work on specific tasks, where assistance is required, ensure work with applicable codes and standards

**Communication**

Internal:

* Faculty - advise on new equipment and repair status
* Faculty - respond to complaints, calls for service
* Staff - Advise on new equipment and repair status
* Staff - respond to complaints, calls for service
* Students - advise on new research equipment and repair status
* Students - respond to complaints, calls for service
* Food Service Staff - respond to complaints, calls for service
* Tenants - respond to complaints, calls for service
* Tenants - advise on new equipment - research and repair status
* Administrators - advise on new equipment and repair status
* Administrators - respond to complaints, calls for service
* Administration - advise on cause and effect of circumstances affecting multiple users and facilities

External:

* Suppliers - orders and purchase supplies and equipment
* Contractors - advise and coordinate
* Inspectors
* Manufacturers - consult on service and purchase of equipment
* Community groups - advise and coordinate provision of services for special events

**Motor/ Sensory Skills**

* Fine Motor Skills - Adjust controls, using precision hand tools
* Gross Motor Skills - Large power tools
* Dexterity - Wiring equipment, assembling equipment
* Equilibrium - working with ladders and high elevations
* Coordination - Climbing in and around equipment
* Hearing - Equipment, unusual noise
* Smell - Leaks, overheated equipment
* Tasting - Tasting salt content in water softeners
* Touch - Vibration or overheating equipment
* Visual - Distinguish wire colours, look for decolourization of burning in electrical faults, inspection of equipment

**Effort**

Mental:

* Sustained Attention - Required in monitoring building automation system, required in soldering pipes, troubleshoot equipment while it is in operation
* Sensory Effort - Operating machine shop equipment, troubleshooting live electrical equipment, monitoring operation of equipment
* Focus - Varied and frequent complaints with many interruptions, frequent task changes

Physical:

* Lifting, moving, the day-to-day physical activity of job place the demands of all physical activities listed.
* Carrying, pushing, pulling, walking, standing, climbing, extending, reaching, bending, kneeling, sitting, remaining motionless, keyboarding

**Working Conditions**

Physical:

* Day-to-day activities of job place the demands of all of the disagreeable physical conditions listed above
* Confined spaces, crowded working conditions, humidity, dampness, drafts, motion/physical instability, heights, noise, vibration, fumes, smoke, odours, hot/cold, dusty/dirty, weather

Psychological:

* Complaints, conflicting work priorities, changing tasks, removal from tasks
* Dealing with angry, disgruntled clients with respect to Building Services issues
* Day-to-day activities of job place the demand of all of the disagreeable psychological conditions listed above