

Job Description



Job Title:	Senior Manager, University of Waterloo Mass Spectrometry Facility
Department:	Chemistry
Reports To:	Department Chair
Jobs Reporting:	N/A
Salary Grade:	USG 13
Effective Date:	February 2024

Primary Purpose

The University of Waterloo Mass Spectrometry Facility Senior Manager is responsible for all aspects of facility operations. The position is accountable to the Chair of the Department of Chemistry to strategically lead facility operations, implement new systems, processes and strategies, as well as management/administration of the state-of-the-art facility located in the Department of Chemistry. As the only mass spectrometry center at UW, the facility participates and supports research programs within the Faculty of Science, WIN (Waterloo Institute for Nanotechnology), School of Pharmacy, Engineering, and Applied Health Sciences, as well as the initiatives in the University of Waterloo's Strategic Plan.

Key Accountabilities

Mass Spectrometry Facility Management

- Provides research support and expertise to Faculties at the University of Waterloo, other universities and industries in a highly specialized area and must work effectively with both academic and administrative units;
- Provides strategic direction (in consultation with the Chair of the Department of Chemistry and the Dean of Science) for the facility's physical infrastructure, management structure, growth strategy and on-going operations;
- Works with stakeholders in various administrative units to develop strategies to improve facility visibility, funding opportunities, outreach and business development;
- Designs marketing materials (brochures, posters, lunch n' learns, presentations etc.) in support of business development and outreach activities;
- Produce reports, presentations (scientific and administrative) that detail facility operations, income, fee structure and other key operational activities;
- Defines detailed technical specifications for state-of-the-art mass spectrometric and ancillary equipment;
- Takes a leadership role in Mass Spec focused research grant applications (provincial and federal levels) by contributing scientific and technical expertise;
- Leads the public tender process for the acquisition, implementation, operation, maintenance, upgrade, and evaluation of all facility equipment;
- Provides experimental strategy and support for UW Mass Spec users with a wide range of research needs including the design and implementation of specialized Mass Spectrometer experiments;
- Undertake research projects, both independently and in collaboration with faculty members. Such research may be in the areas of development of new experiments and/or techniques;
- Member of the hiring committee for the Analytical and Bioanalytical Services Technician
- Active member of the UWMSF User's Committee and provides guidance on fee structure, updates to equipment, CFI considerations, etc..

Financial Administration of the UW Mass Spectrometry Facility/Laboratory

- Ensure that the UWMSF operates on a revenue neutral basis with all expenses associated with repair, maintenance and consumables being offset by charges to users;
- Establish pricing policy for the services provided by the facility with approval from the Department Chair and Mass Spectrometry Users Committee and review the fee structure on an annual basis;
- Responsible for billing of users and submit the monthly internal charges to the Department Financial Officer for processing and to invoice external clients for all worked done in the facility;
- In collaboration with the Department Financial Officer and Administrative Officer, provides input into the annual operating budget needed to operate the facility;
- Responsible to submit equipment consumables and repair cost requisitions through Unit 4.

Training

- Prepare user guides and procedures for standard operations of the Mass Spectrometry equipment;
- Train and supervise users on Mass Spectrometry equipment which includes new graduate students and postdocs plus faculty and staff from across campus. Instruct groups with varying degrees of requirements, providing individualized training as necessary. Also provides technical support during the use of equipment after training has occurred.
- Train, and manage facility support personnel, including the technician, and when necessary, teaching assistants, work-study program students, and student helpers;
- Train and provide guidance and Mass Spectrometry expertise to graduate students and post-doctoral fellows on their research projects and experiments done in the facility;
- Develop and implement training programs, seminars and documentation (SOP's etc.) for facility users;
- Provide in-depth mass spectrometry knowledge (experimental and theoretical) to grad students and Post Doctoral Fellows through one-on-one teaching/training;
- Provide each user with safety training for working in the UWMSF.

Safety

- Responsible for safety in the UWMSF laboratory;
- Maintain personal certifications as required by the Safety Office;
- Update posted safety procedures including WHMIS, hazardous waste disposal etc. so that they are current;
- Maintain equipment certifications and the associated records;
- Prepare and maintain current Standard Operating Procedures (SOPs);
- Maintain first aid kits;
- Complete monthly safety inspections using Safely and report unsatisfactory reports to the Department and Safety Office as required. Work with department to resolve any issues. Be present for departmental or university health and safety term inspections to answer questions as needed.
- Ensure adherence to Health and Safety guidelines by all users.

Other Duties

- Manage, develop content, and update the UWMSF website;
- Serves on the Chemistry graduate student advisory committees for MSc And PhD students as an Adjunct Faculty
- Represent the UWMSF in the Faculty of Science and on university-wide projects and committees where appropriate;
- Maintain an up-to-date knowledge and understanding of new technologies and capabilities in Mass Spectrometry and implement new techniques and equipment in the facility as time and budget permits.

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**All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

Required Qualifications

Education <ul style="list-style-type: none">• Ph.D. in Chemistry with a focus on Mass Spectrometry is required
Experience <ul style="list-style-type: none">• At least 10 years' experience in organic/analytical mass spectrometry• At least 5 years' experience in Facility management• Relevant post-doctoral experience
Knowledge/Skills/Abilities <ul style="list-style-type: none">• Strong understanding of Mass Spectrometry, analytical chemistry, chemistry, biology etc.• Expertise to guide users through the development and implementation of complex methods/analyses and the interpretation of resultant data to achieve project goals• Working knowledge and trained in all aspects of Facility hardware and software for the different platforms currently located in the facility i.e. Waters, Thermo Scientific, Bruker and Agilent• Knowledge of safety procedures for Mass Spectrometer and scientific equipment is required• Proven ability to maintain and repair the mass spectrometers and communicate with users is required• Ability to manage multiple priorities in a fast-paced environment is essential• Excellent written and oral communication skills required• Advanced experience with Microsoft Office Suite, various mass spectrometry vendors software, etc. required• Advanced computer skills including Windows and IOS-based programming required• Incumbent must also complete all required safety training modules as per Safety Office Regulations (e.g., WHMIS, Laboratory Safety, Employee Safety Training, Workplace Violence Awareness Program, and HRs Accessibility module)

Nature and Scope

- **Contacts:** Significant internal relationships include Department Chair and Associate Chairs, Department of Chemistry Mass Spec Users Committee, Chemistry faculty, graduate students, undergraduate students and research personnel, Faculty, staff and students across the Faculties of Science and in other units (e.g. Engineering). Significant external relationships include suppliers (e.g. Bruker, Thermo Scientific, Waters, Agilent), Science Technical Services, Plant Operations and external user such as other Canadian Universities and industry. Builds internal and external client relationships to further expand the research activities of the Facility, improve facility visibility (Communications and Public Relations).
- **Level of Responsibility:** The UWMSF operates 6 sophisticated mass spectrometry systems with a capital value of more than \$3.7 million. The data generated contributes to more than 100 scientific publications annually as well as multiple graduate student thesis and conference presentations/posters. The UWMSF Manager must be able to work independently. The position has very specialized work with no supervision and provides technical advice and guidance to others. Oversee the day-to-day operation of highly specialized equipment under the jurisdiction of the Department of Chemistry Mass Spec Users Committee. An error in the use of the equipment can result in serious damages to the equipment. Provides functional direction to the Analytical & Bioanalytical Services Technician who assists with the operation of the UWMSF.

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- **Decision-Making Authority:** The incumbent will make recommendations on service contracts and new instruments in the UW Mass Spectrometry Facility. The Facility Manager works together with the Mass Spectrometry Users Committee in preparation of grant proposals and Request for Proposals (RFPs) to fund and acquire new Mass Spec instrumentation, assesses equipment available from various vendors of the desired equipment and involved in negotiating terms of the purchase. The Facility Manager is also involved in the annual budget planning process with the Department Financial Officer and Administrative Officer providing input on the annual budget needed to run the facility.
 - **Physical and Sensory Demands:** Attention to detail is needed. Exposure to chemical solvents, noise, high voltage etc.
 - **Working Environment:** Time is typically shared between communicating/collaborating/and training faculty members, students and postdoctoral fellows, operating the facility and an office environment. The UWMSF is an instrumental/chemical laboratory. Works irregular hours as necessary to support all aspects of facility operations. Some after hour and holiday hours (e.g. over Christmas break) are required to check the status of the laboratory.