

Job Description

Job Title:	Lab Director, Research & Special Projects
Department:	Chemical Engineering
Reports To:	Chair, Chemical Engineering
Jobs Reporting:	Manager of Information Systems, Information Technology Specialist, Senior Chemical/Mechanical Systems Designer, Mechanical Technician, Analytical Lab Services Specialist, Co-op student.
Salary Grade:	USG 13
Effective Date:	November 2022

Primary Purpose

The Lab Director, Research & Special Projects is accountable to the Chair of the Department of Chemical Engineering. They provide strategic and operational leadership for laboratory support and services relating to research activities within the Department of Chemical Engineering.

The Lab Director, Research & Special Projects oversees the management of the Chemical Engineering analytical laboratories and all aspects of their operation, and the provision of expert advice in analytical and materials characterization services to support research in the Department of Chemical Engineering, including funded external research interests.

This position is responsible for the supervision of technical staff within Chemical Engineering and provides direction for them to achieve their respective expectations in an efficient and harmonious working environment. Expectations, in this regard, include effective service to the students and faculty in support of teaching and research activities.

The Lab Director, Research & Special Projects also manages the department health and safety program. This includes identifying areas for improvement, arranging for deficiencies to be corrected, promoting a culture of safety through education and activities.

Key Accountabilities

Management of Research Lab Operations

- Manages the overall operation of the department analytical laboratories.
- Provides consultation and expertise for researchers and students in matters of analytical and materials characterization techniques.
- Instructs researchers and students in the proper use and capabilities of the analytical instrumentation to assist them in their research challenges and goals.
- Coordinates and liaises with research personnel and technical staff on laboratory activities, maintenance, and repair of research lab equipment.
- Provides advice in the maintenance of existing analytical instrumentation in all research labs in the department.
- Advises on and assists in the purchase, maintenance, and repair of laboratory equipment.
- Assists faculty in the acquisition of new analytical instrumentation, which includes the writing of equipment grant proposals.
- Maintains an inventory of all ChE equipment and ensures compliance with applicable regulations.
- Encourages collaboration among researchers through sharing of information and resources.
- Liaises with industrial research partners performing contract analytical services in agreement with department protocols.

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- Expands and/or updates knowledge and expertise by attending company, supplier and/or manufacturer training programs concerning analytical instruments or methods of analyses, with special emphasis on new devices and techniques.
- Other duties and special projects as required by the department Chair.

Administration and Supervision

- Manages and participates in the development and implementation of goals, objectives, policies, and priorities for the department technical staff (including mechanical and IT staff); recommends, within departmental policy, appropriate service and staffing levels; recommends and administers related policies and procedures.
- Participates in selection, training, mentoring, motivation, and evaluation of technical staff (including mechanical and IT staff); provides or coordinates staff training, partners with employees to reach and exceed performance expectations.
- Manages and coordinates the work plan for the technical staff (including mechanical and IT staff); meets with staff to identify goals, and assists in resolving concerns; assigns work activities, projects, and programs; monitors workflow; reviews and evaluates output, methods, and procedures.
- Provides high and low level technical and professional expertise in the area of staff guidance with respect to ill-defined, non-routine multi-disciplinary challenges which are typically encountered in the day-to-day operation of research labs.
- Promotes a culture that encourages continuous improvement and innovation in support of the operations of research laboratories.
- Liaises with Plant Operations, IST, and the Dean's office with respect to utilization, construction, renovation, maintenance and repair of the entire physical space and equipment in the department.

Management of Chemical Engineering Health and Safety Program

- Responsible for the overall management of the department's health & safety program.
- Oversees and maintains all the safety documentation (safety manual, training records, safety reports, incident reports, inspection reports) for the department.
- Serves as health and safety resource to faculty, staff, and students, providing laboratory and chemical safety information. Assists in the investigation of workplace accidents.
- Identifies, monitors, assesses, and limits risks through hazard analysis and inspections.
- Advises the department Chair and PI's in health and safety related matters. Ensures that advice is evidence based and data informed.
- Promotes a safe work environment by collaborating with faculty, researchers, students, and technical staff, and through instructive activities.
- Represents the department on H&S Matters, serving on committees and working groups.
- Liaises with Dean's Office and Safety Office on evacuation plans, fire safety, warden training, first aiders, etc., and ensures compliance with all safety-related University policies and practices.

**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

- A university degree in Chemical Engineering or Chemistry. A PhD degree is preferred.
- Understanding of academic research environment is an asset.

Experience

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- A minimum of ten years managing lab operations in an academic environment.
- Must have experience and in-depth knowledge of a very broad range of laboratory analytical equipment, including spectroscopy, chromatography, microscopy, and other material characterization techniques.
- Experience with managing, motivating, and developing technical staff is an asset.

Knowledge/Skills/Abilities

- In-depth knowledge of a broad range of material characterization techniques, including laboratory equipment functionality and troubleshooting, to support the diverse research topics developed by researchers in the Department of Chemical Engineering.
- Must be experienced with interacting with students in a professional manner to provide technical advice.
- Excellent interpersonal, analytical, research, and creative problem-solving skills.
- Demonstrated the capability and desire to participate in a continuous learning environment.
- Knowledge of advanced administrative principles and practices, including goal setting, program development, implementation evaluation, project management, and supervision of staff is necessary.
- Incumbent is well versed in leadership principles and practices of employee supervision, including work planning, assignment, review/evaluation, and the training of staff in work procedures.
- Multi-tasking, concurrent task and problem management skills are essential with the ability to assess, analyze and resolve issues. Tact, confidentiality, judgement and diplomacy are also essential.
- Proficient in time management of competing deadlines while maintaining close attention to details and accuracy.
- Advanced proficiency with Microsoft Office suite.

Nature and Scope

- **Contacts:** Internally, the incumbent advises and consults regularly with the Chair, Administrative Officer, faculty, administrative and technical staff. The incumbent interacts with faculty members, students, researchers, teaching assistants and co-op students in research laboratory settings. External contacts include equipment suppliers and technical support reps, plus third-party technicians.
- **Level of Responsibility:** : The position is responsible and accountable for the management and operation of the analytical laboratories in the department of Chemical Engineering. Provides expert advice and train researchers in analytical and material characterization techniques, and H&S matters. Managerial responsibility for direct reports.
- **Decision-Making Authority:**. The incumbent works independently with a high level of initiative and flexibility within defined policy parameters. Enables prioritizations, timelines, and task allocations with technical staff to meet the Department of Chemical Engineering objectives.
- **Physical and Sensory Demands:** This position experiences demands typically associated with working in a research lab laboratory environment, that may include seating or standing for long periods, some lifting and rearranging of furniture/equipment.
- **Working Environment:** Laboratory and office space. Moderate exposure to disagreeable conditions typical of a management position and may involve adversarial situations when discussing compliance issues. High volume of work, constant interruptions, and time-sensitive decision-making are routine. In certain cases, the Research Lab Director may handle hazardous materials and enter higher hazard work areas (construction projects, injury, spills, and emergency situations). Safety procedures must be strictly enforced.