

Job Description



Job Title:	Senior Mechanical Technologist / Lead Designer
Department:	Plant Operations, Design and Construction Services
Reports To:	Director, Design and Construction, Services/University Architect
Jobs Reporting:	None
Salary Grade:	USG 9/10
Effective Date:	July 2023

Primary Purpose

Reporting to the Manager, Mechanical Engineering within Plant Operations, the Design Technologist is responsible for mechanical design and drafting, collaboratively determining and meeting University client requirements for cost effective, energy efficient mechanical distribution and systems for the University campus infrastructure.

Responsibilities will align with the Plant Operations goal of contributing towards providing a safe and accessible, invitingly clean and comfortable, functionally-enriched and well-maintained campus environment through service excellence.

Key Accountabilities

Technical Design and Project Coordination

Provides mechanical engineering design and technical support in the analysis, design, and procurement of new mechanical installations, renovations and retrofits to existing facilities. Contributes through the development and review of conceptual, schematic and detailed designs in the mechanical discipline under senior engineering supervision, ensuring work is designed to meet applicable quality standards, codes, regulations, University and client requirements.

- Surveys existing site conditions, takes measurements and/or records existing information related to equipment specifications and systems.
- Applies fundamentals and engineering tools to design HVAC, sanitary, fire suppression, plumbing, and control systems.
- Collaborates with Plant Operations Maintenance Department in resolving operating and maintenance issues and in the improvement of energy efficiency to reduce operating costs and support campus sustainability objectives and goals.
- Prepares concept sketches and preliminary estimates to maintain budget control and assist the client in validation of the project.
- Coordinates directly with engineers and technologists as part of an integrated multidisciplinary project team at all stages, from concept design to final commissioning
- Prepares in a timely manner mechanical drawings, specifications and all necessary contract documentation for requests for bids and contract award.
- Prepares site instructions, contemplated change notices, change orders and reviews shop drawings during construction phase.
- Follows internal procedures and policies for procuring suppliers, consultants and contractors.

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- Coordinates with Plant Operations Maintenance Department to ensure designs are consistent with maintenance preferences.
- Maintains proficiency in the use of current versions of Computer Aided Design and Drafting (CADD) software used in the department.
- Completes design and CADD drafting for projects where Owner is acting as consultant on internal projects.
- Performs as Owner's representative when periodically meeting Contractors during bid periods, when resolving problems during construction and performing general conformance reviews.
- Reviews shop drawings prepared/submitted by contractor to ensure compliance with University requirements, standards and the performance set out in the design and contract documents.
- At the completion of a project, updates or coordinates the updating of relevant CADD record drawings for use in space plans, fire safety plans and 'you are here' plans.
- Supports the continuous improvement of, and adherence to campus standards for design, fixtures, equipment, etc.
- Undertakes feasibility studies, analysis and reports as directed by senior staff
- Inputs time in Plant Operations electronic timesheet reporting system on a daily basis

Other

- Performs other related duties and responsibilities as assigned and supports departmental initiatives.

**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

- Engineering Degree or Engineering Technologist/Technician (B.Eng, B.ASc. or CET)
- The incumbent will be a graduate of a recognized University or College, two or three (3) year in mechanical engineering technology

Experience

- Minimum three (3) years mechanical design experience in HVAC, sanitary, fire suppression, plumbing, and control systems.
- Experience within a major institutional sector such as post-secondary education, or healthcare will be considered an asset.

Knowledge/Skills/Abilities

- Must be familiar with applicable mechanical codes/standards and building codes including but not limited to: Ontario Building Code (OBC) and American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards and guidelines, CSA.
- Demonstrated ability to apply working knowledge of applicable design codes and standards related to mechanical design and construction.
- Good understanding of drawing conventions and standards.
- Ability to produce quality deliverables and to monitor project tasks.
- Strong analytic, oral, and written communication skills.
- Excellent conflict resolution skills.
- Excellent communication and interpersonal skills, with a deep commitment to customer service.
- Proven innovative approach to problem solving and conflict resolution.

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- Must be flexible and adaptable to changing requirements, responsive to project and client goals.
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- Intermediate proficiency utilizing the latest version of the following programs: AutoCAD, MS Word, MS Excel, MS Outlook

Nature and Scope

- **Contacts:** This position comes in contact with a wide variety of internal and external people at all levels of responsibility. Must maintain excellent relationships with all of these people. This requires excellent personal and communication skills.
- **Level of Responsibility:** Accountable to department Manager and/or Director, Design and Construction Services for successful implementation and completion of projects. The position has no direct supervision of others.
- **Decision-Making Authority:** Decisions made with guidance from senior staff.
- **Physical and Sensory Demands:** Minimal physical demands primarily operating within an office environment. Project site visits as required, wearing personal protective equipment.
- **Working Environment:** Team environment in an office based setting, and involving collaboration with all business and operating units within the department and across the University. Regular working hours, with some evening/weekend work required.