

The University of Winnipeg

Classification Specification

Date: June, 2022

Classification: Building Systems Manager

Unit: IUOE

Character of this Classification Level

The Building Systems Manager applies fully skilled and extensive experience on multiple University of Winnipeg's building automation systems; primarily related to heating/cooling controls, lighting controls, Intrusion Systems, Access Control Systems, VMS Systems, Intercom, and auxiliary control systems. This includes but is not limited to inspecting; commissioning; technical support; training; and supervision of repair, installation, and maintenance. This includes administration, management, and design of building systems for maintenance and projects. The Building Systems Manager participates in development, modification and adherence to policies, procedures, and standards. Acting as the technical coordinator in a project team, this position is fully accountable for the team's and their own work quality, whether it requires a technical or leadership capacity.

Although general direction is provided, individuals must possess the background knowledge and experience to make informed and responsible decisions which are technically sound and take fully into account the needs of the University. This position provides leadership, direction, and guidance to other staff at the same and lower levels and may be required to assume their responsibilities during normal absences.

Positions at this level also provide both internal and external consulting services within their areas of expertise.

Characteristic Duties and Responsibilities

1. Commissioning & Energy Management
 - Analysis of energy usage and historical data to determine system failures and opportunities for improvement.
 - Working with contractors on new buildings and retrofit projects to ensure optimal system performance during the commissioning phase.
 - Monitoring and reading energy meters (Gas/Hydro) to implement changes that reduce energy consumption and greenhouse gas emissions.
 - Management, programming, and design of all energy dash boards that display utility and energy consumption data on campus

2. Design

- Control system design or design assist on HVAC, lighting, Intrusion, Access Control, VMS, and Intercom projects.
- Calculating control system requirements for small projects or working with design team to develop engineered drawing sets on large installation projects.
- Provide specification for control system equipment and scope of work preparation.
- Coordinates, investigates, and makes recommendations concerning hardware and software product evaluations, purchases, design, and development methodologies and/or systems
- Devises, designs, develops, and implements new systems including: testing, prototyping, integrating, templating, and security
- Participate in the integrated design process by reviewing drawings and attending design meetings for capital projects.
- Assist design and engineering teams with sustainable design strategies and technologies for buildings and sites.

3. Programming/Graphical Design/Drafting

- Program building system controllers to operate as required using logic based functions, programming with basic and overall network programming/configuration.
- Implement graphical changes to any visual displays showing building automation systems.
- 3D rendering and animation of automation system graphics, dashboards, and floor plans.
- Maintain and update CAD drawings and databases for as-built purposes.
- Create CAD drawings for wiring layouts.
- Programming/ configuration of intrusion systems, VMS, access control and intercom systems.
- Administration of servers and client PC's; including installation, configuration and updating of building automation software.

4. Project Supervision & Administration

- Prepare contracts and drawings for new and retrofit building automation systems installations.
- Fulfills contract administration and project management roles to ensure jobs are completed as per specifications.
- Provides leadership of medium to large project(s) and teams, which encompasses: performing business and systems analysis, acting as a mentor and a technical consulting expert
- Estimates, plans, schedules, coordinates, and tracks the work of a team or co-workers and leads them to attainment of performance and quality objectives.
- Supervises team members, external vendors and/or external contractors to ensure all specifications are met.
- Participates in all phases of project life cycles
- Provides administration of campus services and functions which could include: building system networks & communications, data management, documentation, development, infrastructure, security, budgets, or contracts

- Develops and maintains support documentation for: policies; contingency plans; architecture principles, applications, and information; network infrastructure and databases; inventory and technical files
- Participates in the development and/or modification of policies, procedures, and standards
- Conducts meetings, presentations, classes and/or training seminars

5. Repair/Installation/Troubleshooting

- Supervision of repair, installation and troubleshooting of computer-based building automation systems.
- Installs, tests, and troubleshoots new or existing hardware and/or software concerns including: operating systems, firmware and programs for new requirements and preventative maintenance alike.
- Supports and maintains a wide variety of electronic, electromechanical and microprocessor controlled equipment used for environmental and security purposes, diagnosing causes of malfunctions, performing component level repairs and modifications and/or arranging for servicing
- Hiring of qualified service contractors to perform required work.

Qualification Required

A. Formal Education and Designations (level and nature):

- Post-graduate degree in a related discipline from a recognized institution and Experience plus 2 years of directly related experience, or
- Professional degree in a related discipline from a recognized institution plus 3 years of directly related experience, or
- Undergraduate degree in a related discipline from a recognized institution plus 4 years of directly related experience, or
- Accredited Institutional diploma in Mechanical, Electrical, Instrumentation or Electronic Engineering from a recognized institution plus 5 years of directly related experience, including: an extensive knowledge and understanding of multiple areas such as: HVAC control, access control, intrusion systems or video management systems
- P. Eng, CET, C. Tech or equivalent combination of training and experience.
- Class 'M' electrical license
- or
- An acceptable equivalent combination of education and experience may be considered
- PMP Designation considered an asset

B. Experience

- Minimum three (3) years demonstrated experience in maintenance, repair, replacement, upgrading, and remediation of existing building automation systems.
- Minimum two (2) years demonstrated experience in the management of design, installation, construction, commissioning, budget control, estimating.
- Minimum three (3) years demonstrated experience in project management.

- C. Skills, Knowledge, Abilities including software, computer systems, specialized, technical instrument/machine operation, office/management, etc. (level and nature):
- Demonstrated knowledge of project management principles.
 - Demonstrated ability to prepare reports which includes preparation of contract documents and detailed business plans for major replacement or refurbishment which includes cost reduction strategies and payback. Minimum three (3) years
 - Demonstrated ability to plan short term preventative maintenance work and long term capital renewal.
 - Demonstrate ability in budget preparation and control including financial tracking and cost estimating.
 - Demonstrated ability to read, interpret, prepare, and revise drawings and/or blueprints.
 - Demonstrated ability to establish and maintain effective working relationships with the public and fellow co-workers.
 - Demonstrated ability to plan and organize work effectively.
 - Demonstrated ability to work with a minimum of supervision, expedite and resolve issues, make accurate decisions and recommendations.
 - Demonstrated ability to keep records and prepare written reports.
 - Demonstrated ability to communicate effectively both orally and in writing.
 - Demonstrated ability to use hand tools, power tools, and complex measuring instruments. - Knowledge of applicable codes and regulations.
 - Must be physically capable of performing the duties of this position.

OR EQUIVALENT COMBINATION OF EDUCATION, EXPERIENCE, SKILLS, KNOWLEDGE, AND ABILITIES