PEA Job Description

1. Position Identification

<table>
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<tr>
<th>Position Number</th>
<th>992144</th>
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<tr>
<td>Position Title:</td>
<td>Building Automation System Specialist</td>
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<tr>
<td>Department:</td>
<td>Facilities Management</td>
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<td>Reports to:</td>
<td>Energy Manager</td>
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<tr>
<td>Number of Direct/Indirect Reports</td>
<td>Direct 0    Indirect 0</td>
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<tr>
<td>Classification Level</td>
<td>SG12</td>
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<tr>
<td>Last Updated</td>
<td>January 2018</td>
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2. Position Summary

As stewards of the campus, Facilities Management fosters and enriches an inviting and functional environment that welcomes and supports all who come here. Facilities Management clients include faculty, staff and students. Facilities Management reflects high service delivery standards and requirements. The team works together to ensure effective, efficient and safe performance for the operation, maintenance and repair of campus buildings.

Reporting to the Energy Manager, the Building Automation System Specialist performs technical work in the development and ongoing management of the UVic campus direct digital control building automation system (BAS). The BAS’s primary function is to monitor and control the operation of building heating, ventilation, and air conditioning systems as well as to optimize building energy consumption while maintaining satisfactory environmental conditions.

The position is responsible for improving the functionality of the BAS for all users of the system including building operators, electrical and mechanical technicians, project managers, and energy managers, consultants, and senior management. The BAS Specialist is the BAS subject matter expert and holds final approval for all projects related to the BAS. They recommend and deliver measures that optimize energy use while maintaining satisfactory environmental conditions. The position requires preparation of various reports, presentations, and communications to various Facilities Management departments and external university departments.

3. Key Responsibilities and Expectations

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<th>Key Responsibilities.</th>
<th>Expectations:</th>
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| Management of BAS Initiatives 35% | - Works collaboratively with the Energy Management team to deliver the BAS components of the Strategic Energy Master Plan: provides input on energy conservation and efficiency projects, campus energy standards, and policies and procedures designed to maintain an effective conservation program
- Identifies, assesses, and prepares business cases for BAS upgrades, expansion, and alteration projects that reduce energy use and/or improve BAS functionality while maintaining building environment comfort levels; projects may include capital improvements, software improvements, or operational improvements.
- Develops and plans project pipeline strategy to upgrade BAS hardware and software; prioritizes projects based on business
|
- Develops and delivers BAS software programs that result in sustained reductions in energy use and/or improvements to BAS functionality while maintaining satisfactory environmental conditions.
- Designs and delivers monitoring hardware that can be integrated into the BAS and meet the requirements of the Monitoring, Targeting, and Reporting component of the Strategic Energy Master Plan.
- Leads the BC Hydro Continuous Optimization Real Time Energy Management program, responsible for delivery of fault detection and diagnostic systems and automated system optimization.
- Acts as project sponsor for the delivery of capital projects related to BAS expansion, upgrades, and alterations:
  - Reviews drawings and specifications for new projects and provides comments and recommendations on their effect.
  - Assists in the coordination of contractor alterations or extensions.
- Identifies, assesses, and delivers new BAS manufacturer software and hardware applications.
- Maintains an up-to-date knowledge on new BAS technology and provides assessments for their use at UVic.
- Carries out studies, prepares reports and maintains BAS documentation and records.
- Develops content for building performance displays, energy performance displays, and critical system performance displays.
- Prepares scope of work documents.
- Supervises re-commissioning of equipment.

**BAS Maintenance Optimization 35%**

- Oversees the operation and maintenance of the BAS, including client/server hardware and software, auxiliary control units, network devices, and all other components of the integrated system.
- Develops and manages BAS topology of inventory to manage BAS infrastructure.
- Reviews and approves maintenance work requests for the BAS, determines the required scope of work and approves the associated costs, administers and co-ordinates the work of UVic personnel or contractors working on the BAS.
- Reviews and approves requests to change HVAC schedules, investigates opportunities to reduce HVAC schedules.
- Develops operating procedures for efficient operation and maintenance of BAS controlled HVAC systems.
- Conducts BAS training seminars and workshops for Facilities Management staff.
- Submits BAS hardware change requests to maintenance staff.
- Conducts routine audits of the BAS and implements changes to improve the system functionality and reduce building energy consumption.

**BAS Project Management Support 20%**

- Reviews projects during all project phases including planning, design, construction, and commissioning to ensure that consideration is made for utilization of the BAS and Facilities Infrastructure Technical Standards are upheld.
- Coordinates, monitors, and assists the project team in schematic design and design development project phases.
• Coordinates, monitors, and assists the project team in the development, review, and approval of design and construction documents based on the project scope, budget, as well as UVic standards and guidelines
• Coordinates, monitors, and assists the project team in the construction phase of the project by training and directing contractors in the use of the BAS, recommending change orders to the BAS as needed, providing verification review that a new or altered BAS is functional as specified in the project
• Liaises with contractors, consultants, suppliers in matters regarding the BAS and represents UVic in testing, inspection and the commissioning of new construction work for BAS upgrades or expansion

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<th>BAS Standardization 10%</th>
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<td>• Assists with the development of Facilities Infrastructure Technical Standards (FITS) related to energy efficiency, including: graphical user interface, networking, code, and programming documentation</td>
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<td>• Works to develop and implement BAS initiatives such as operating policies, standard operating procedures, and guideline</td>
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<td>• Assists with the development, communication and promotion of an energy and resource conservation culture to the Facilities Management community</td>
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<td>• Liaises with BAS users, provides advice, and assists other staff in using the BAS as a diagnostic tool</td>
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4. **Classification Factors:**

**Problem-Solving:**
- Able to develop a holistic understanding of a BAS system valued over $20 million and develop a long term system strategy to meet the needs of multiple program initiatives, and multiple organizations across UVic including Finance and Operations, Academic, and Research.
- Able to trouble-shoot complex building HVAC systems and efficiently understand how they operate and how to improve the systems
- Able to determine the root cause and de-bug software programs
- Able to write software programs for building automation systems
- Able to integrate new software applications into the BAS
- Able to troubleshoot communications and network issues as they arise
- Able to negotiate contracts with consultants, equipment vendors, and contractors
- Identifies and resolves problems in a timely manner
- Gathers and analyzes information skillfully
- Works well in group problem solving situations
- Uses reason even when dealing with emotional topics
- Meets challenges with resourcefulness
- Generates suggestions for improving work
- Develops alternative approaches and ideas
- Presents ideas and information in a manner that gets others’ attention
- Use good judgment and experience to solve complex operational and technical challenges
- Productive and efficient deployment of resources and materials

**Responsibility for Financial & Material resources:**
- Responsible for the effective operation of UVic BAS valued over $20 million
- Responsible for projects with an annual budget up to $500,000
- Negotiate contracts w/ vendors or suppliers
• Forecast project budgets
• Audit financial data
• Follow UVic purchasing policies
• Keep clear and accurate financial records

Responsibility for Human Resources:
• The BAS Specialist receives supervision from and reports to the Energy Manager
• The position requires supervision of consultants and contractors to meet their scope of service on time and on budget
• This position may provide informal supervision to other staff working on project implementations, as required
• Conducts BAS training to Facilities Management staff

Impact of Decisions and Actions:
• The BAS Specialist is accountable for ensuring that programs and services are operating within established frameworks determined by the FMGT Service Plan, Professional Development Plan, Strategic Energy Master Plan, and the BC Hydro Continuous Optimization Real Time Energy Management program
• Position has the potential to lower University utility costs, reduce university maintenance costs, improve failed system maintenance response time, improve the safety of critical systems, reduce the campus environmental footprint, and achieve environmental sustainability goals outlined in the University Operations Sustainability Action Plan and the BC Greenhouse Gas Reductions Act
• The use of the BAS is highly complex, the consequence of delivering an incorrectly designed or miss-programmed system is the potential for: safety incidents to building operators, discomfort to building occupants, and/or irreparable damage to lab experiments
• The BAS Specialist is accountable for ensuring that items of moderate consequence are escalated in a timely and appropriate manner

Independence:
• The BAS Specialist is the subject matter expert in the BAS, they hold final approval for all projects related to the BAS
• The BAS Specialist evaluates progress and success against performance standards. Appraises and resolves deficiencies and challenges. Ensures deadlines are met and keeps Energy Manager and other stakeholders informed of program status
• The BAS Specialist is expected to coordinate BAS initiatives and monitor related programs independently as required
• Issues or concerns that are abnormal or holding high consequence to the programs resources will be escalated to the Energy Manager

5. Summary of qualifications:

This position requires a Bachelor’s degree in mechanical or electrical engineering, or engineering technology or related field specializing in facilities management, plus the following experience:
• Minimum of 10 years of experience in building automation systems
• Maintaining or managing a complex group of commercial / institutional building mechanical and electrical systems
• Business experience with proposal report preparation, business financial case preparations

An equivalent combination of education and experience may be considered.

In addition this position requires:
• Expert level knowledge and experience with Reliable Controls Software and associated applications such as RC Archive and RC Reporter
• Expert level knowledge with computer programs related to building automation systems, DDC systems, programmable controllers, and data systems spread-sheets, and system
• Expert level knowledge with building automation system instrumentation
• Strong skill level working with Microsoft Word, Excel and PowerPoint
• Extensive technical skills relating to institutional building maintenance, HVAC system maintenance, mechanical maintenance, electrical maintenance
• Strong knowledge in networks such as IP and MS/TP for diagnostics of systems, understanding BACnet and the ability to work with IT Systems department
• Strong understanding of cybersecurity issues related to a BAS, networks, and BACnet protocol
• Strong interpersonal and communication (oral and written) skills
• The ability to establish and maintain positive, effective working relationships with all members of the campus community
• Strong analytical and organizational skills
• Dedication to industry standards and improvements, continuous learning and development and improvements
• Demonstrated ability in writing detailed reports
• Capable of performing financial analyses in accordance with the University requirements
• Project management experience
• Budget preparation and management experience
• Able to provide effective briefings, seminars, presentations

Desirable Knowledge, Qualifications, and Coursework:
• Experience working in a university campus
• Working knowledge of Canadian and Provincial Building Code
• ASHRAE 90.1 Energy Standard for Buildings
• Cybersecurity training
• Advanced Building Recommissioning

Employee’s Signature: _______________________________ Date: ________________

Manager’s/Supervisor’s Signature _______________________________ Date: ________________