

Job Description

Job Title:	Information Systems Team Lead
Department:	Centre for Education in Mathematics and Computing (CEMC)
Reports To:	Administrative Officer, CEMC
Jobs Reporting:	None
Salary Grade:	USG 11
Effective Date:	September 2022

Primary Purpose

The Centre for Education in Mathematics & Computing (CEMC) is Canada's largest and most recognized outreach organization for promoting and creating activities and materials in mathematics and computer science and is housed within the Faculty of Mathematics at the University of Waterloo. Our mission is to increase interest, enjoyment, confidence, and ability in mathematics and computer science among learners and educators in Canada and internationally. We do that through a commitment to our core values: future readiness, access, community and impact. As such, the CEMC is the first point of contact at Waterloo for a significant percentage of our future undergraduate and graduate students and their parents. Through outreach activities, the CEMC has perhaps the largest set of external points of contact amongst any unit on campus.

The Information Systems Team Lead is responsible for the deliverables, maintenance and support of all information technology and related computing systems, both in-house developed and externally designed and integrated, in the Centre for Education in Mathematics and Computing (CEMC). These responsibilities include management of computing environments and supporting infrastructure, enabling and improving outcomes for a wide breadth of outreach initiatives in support of CEMC strategic goals and client needs. These programs include, but are not limited to: 12 mathematics and three computer science contests, teacher conferences, student workshops, CEMC Visits Schools and the integrated systems and platforms associated.

Key Accountabilities

Systems Design and Application Development

- Supports, manages, and improves the CEMC's computing infrastructure and related processes
- Proposes to senior leadership, with corresponding reports and presentations, whether to buy, make or subcontract CEMC systems framework. Examples include, but are not limited to: online contest platforms, contest marking system, client databases and repositories, e-commerce and tax integration, web site maintenance and migration support, etc.
- Creates design and functional specifications and architectural design decisions for reuse
- Creates reusable test suites and thorough testing plans for Information Systems team, including but not limited to: automated test suites for multiple servers, unit and system test plans, testing interfaces for internal Waterloo systems integration and external systems
- Specifies, tests, and deploys systems and application software on a variety of platforms, including servers, cloud and desktop systems
- Develops training and user manuals for a myriad of CEMC stakeholders and supports junior Information System team members in the creation and maintenance of systems and process documentation to ensure accuracy
- Manages the hardware lifecycle, from provisioning and deployment through decommissioning

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- Manages large and complex computing environments
- Manages and maintains critical network services in support of the CEMC's operations
- Diagnoses and resolves system and application problems, monitors systems and applications performance
- Manages technical projects using best practices to achieve successful outcomes
- Recommends enhancements and improvements to systems and processes; provides guidance on technological evolution

Client Service

- Provides excellent client service to the CEMC and associated individuals and groups in their use of computing and related technology, in a timely manner
- Works with internal teams and external clients to understand and resolve their computing and related technology issues and documents client requests
- Establishes appropriate policies and procedures to minimize client complaints
- Delegates problems to those who are best suited to solve them based on expertise and resource availability and resolves escalated client complaints brought forward by junior team members and staff
- Establishes mechanisms to support junior level Information Systems team members to minimize future modifications to systems
- Keeps clients informed of the progress toward resolution of their issues
- Communicates with clients and peers (within the CEMC, Faculty and elsewhere) effectively, clearly, and with empathy
- Provides training and presentations to technical and non-technical audiences, identifying appropriate style, content and communication
- Provides documentation for both technical and non-technical audiences
- Records work activity for internal use in order to communicate progress and updates to clients when required

Technical Support

- Distributes and manages support tasks for large projects to appropriate staff, with input on resourcing from the Administrative Officer
- Serves as a mentor and advisor for junior support staff and co-op students
- Designs and/or modifies, trains and refines systems related to client feedback, prioritizing needs and weighing risks and cost/benefits once review of end-user requests are complete and impact across the CEMC is determined
- Manages documentation across the development group, ensuring consistent documentation practices are met
- Represents CEMC effectively with other groups, internal and external to the University, that require support or information

Time management and organization

- Manages the varied and overlapping annual calendar of CEMC events during the September to June school year and manages the various project activities during the summer months
- Prioritizes activities based on scope, deadlines and resource availability
- Schedules completion dates and milestones; reviews weekly/monthly progress reports
- Works within the time constraints of other units (Finance, Central Stores, etc.) when engaged with interdepartmental, cross-team projects

**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*

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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">• Master's Degree in a computing discipline together with relevant experience required
Experience <ul style="list-style-type: none">• 5 – 10 years' experience in IT• Experience managing large projects, with a PMP certification from the PMI (or equivalent) considered an asset
Knowledge/Skills/Abilities <ul style="list-style-type: none">• Must be able to convey an overview of the entire technological philosophy, including hardware and software choices• Provides advice for integrating entire CEMC software and hardware requirements ensuring ongoing compatibility• Evaluates pros/cons of various possible hardware systems and O/S combinations in the CEMC• Make decisions about hardware and operating system requirements: evaluates models, products and versions• Possesses strong client service skills and demonstrates ability to work as part of a team• Learns quickly and adapts to change• Applies abstract thinking to solve complex problems• Works independently with minimal supervision• Develops system administration skills for at least one of Windows, Mac OS, or Unix based systems, or equivalent skills in software development or systems support, with demonstrated potential to gain expertise in other areas• Familiar with software, systems, and component level hardware aspects of supporting changing environments• Demonstrates front-line support skills• Uses verbal and written communication effectively with audiences of a wide range of levels of technical knowledge and understanding• Capable of dealing with people experiencing high levels of stress who need immediate support• Excellent attention to detail• Possesses excellent time management skills• Is dedicated to process improvements and embraces change management• Is committed to life-long learning• Obtaining and maintaining a clear Vulnerable Sector police check is a condition of ongoing employment.

Nature and Scope

- **Contacts: Internal:** Significant contact and relationships with other members of the CEMC. Nature and scope include presenting, discussing information and problems; mentoring and coaching; providing direction to junior IS staff and co-op students. **External:** Presents, discusses information and problems; serves as the main contact for technical issues related to CEMC with MFCCF, Central Stores, Finance, WPrint; IT staff across the University in individual and group contexts; staff, faculty, students, and visitors associated with the Centre; technology specialists at other institutions and organizations; and technology vendors.

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- **Level of Responsibility:** The job includes responsibility for deliverables of all assigned IT related systems and initiatives in the CEMC; mentorship and coaching of permanent, casual or temporary staff; checks milestone and project status; overall job monitoring. Level of responsibility increases with skill and experience. See Career Path Matrix.
- **Decision-Making Authority:** Makes decisions about the assignment of project work to junior IT staff and co-op students. Recommendations to management on the entire lifecycle (development, purchase, repair, replacement and decommissioning) of hardware and software purchases to ensure compatibility with existing systems. May decide when and how to affect the working environments of clients throughout the Centre. Implements the overall CEMC IT plan with input from the Administrative Officer and senior leadership.
- **Physical and Sensory Demands:** Minimal demands typical of an administrative position within an office environment. Occasional lifting, carrying, stretching, and reaching when dealing with hardware placement and set up. Occasional exposure to hardware located in machine rooms.
- **Working Environment:** Regular working hours with some unusual hours or schedules, extended weekend hours, or weekday extended hours with varying volume of work leading up to contests and events cycles. Occasional travel may be required. The position requires balancing competing demands of short- and long-term projects, periodic interruptions when engaged in focused work, and the awareness that any errors may damage large numbers of computing systems and/or affect the functionality of major programs offered by the CEMC to clients, potentially impacting reputation and financial revenue. Exposure to disagreeable conditions typical of a supervisory position. Most work takes place in private offices in front of a computer workstation.