

St. Lawrence College

Position Description Form (PDF)

Effective Date: June 23, 2015

Campus: Tri-Campus
Incumbent's Name: Vacant
Position Title: IT Systems Microsoft Developer
Payband: J
Position Number: 00000517
Hours per Week: 35
Supervisor's Name and Title: Associate Director, IT Systems Security & Networks
Completed by: Dave Mayo

Signatures:

Incumbent: _____
(Indicates the incumbent has read and understood the PDF)

Date: _____

Supervisor: _____

Date: _____

Supervisor's Supervisor: _____

Date: _____

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Position Summary

The incumbent is primarily responsible for developing and maintaining software solutions related to the St. Lawrence College information systems, using a variety of Microsoft technologies. Currently the portfolio of information systems includes a number of complex mission critical applications such as the student information system, the human resources and payroll system, the financial system, the online learning management system, the St. Lawrence College public website content management system, the School of Online and Continuing Education ecommerce system and student portal. The college is establishing Microsoft SharePoint 2013, Nintex Workflow and SQL Server 2014 as its platforms for delivering a variety of information services, to consolidate disparate information, and to streamline business processes. The incumbent will leverage a variety of Microsoft and 3rd party development technologies to establish and deliver new information services and business process automation on this platform.

The incumbent will work on projects that are managed according to the Project Management Institute (PMI) principles and the St. Lawrence College ITS department's project management methodologies. The incumbent will not be required to act as a project manager, but must be able to perform some functions to support the project management process such as providing input into the development of a project plan, estimation of task effort, tracking of actual effort for tasks performed and identification of risks related to their work. The incumbent will work in a team model where their specific activities, task assignments and priorities will be determined in collaboration with other Information Systems team members, the project team, the assigned Project Managers, and the Director of Information Systems in order to support the overall ITS objectives for solution delivery and project success.

Duties and Responsibilities

	%
1. Perform developer tasks within the software development lifecycle in order to deliver and maintain Information Systems software solutions. These tasks primarily include developing software specifications, designing software, implementing new software, modifying software, testing software and writing software documentation. Currently the portfolio of information systems includes a number of complex mission critical applications such as the student information system, the human resources and payroll system, the financial system, the online learning management system, the St. Lawrence College public website content management system, the School of Online and Continuing Education ecommerce system and the student portal. Examples of the types of software solutions or modifications include: • Reporting and analytic / business intelligence solutions • Data integration or exchange processes • Data collections forms • Electronic workflow processes • Data validation processes • Computational processes • Minor customization of delivered enterprise applications • Information Systems automation or batch processes	70%
2. Provide assistance in the resolution of incidents and fulfillment of service requests related to the college information systems. An example of resolving an incident could include investigating why someone has an issue completing an electronic workflow process that was developed.	15%
3. Develop and maintain technical and non-technical competencies and certifications.	15%

1. Education

- A. Check the box that best describes the **minimum** level of **formal** education that is required for the position and specify the field(s) of study. Do not include on-the job training in this information.

☐ Up to High School or equivalent ☐ 1 year certificate or equivalent ☐ 2 year diploma or equivalent

☐ Trade certification or equivalent ☒ 3 year diploma/degree or equivalent ☐ 3 year diploma / degree plus professional certification or equivalent

- ☐ 4 year degree or equivalent
 ☐ 4 year degree plus professional certification or equivalent
 ☐ Post graduate degree or (e.g. Masters) or equivalent
- ☐ Doctoral degree or equivalent

Field(s) of Study:

Computer Science or Information Systems program of study that includes coverage of a wide range of topics including information technology, information management systems, databases, applications, networks and information security. As a minimum the position requires a 3 year diploma / degree. Candidates without a current Microsoft Certified Solutions Developer (MCSD) certification are expected to work towards obtaining this technical certification as part of the 15% of time allocation towards developing and maintaining competencies and certifications. Candidates with a current Microsoft Certified Solutions Developer (MCSD) certification are expected to maintain a valid certification status with Microsoft.

- B. Check the box that best describes the requirement for the specific course(s), certification, qualification, formal training or accreditation in addition to and not part of the education level noted above and in the space provided specify the additional requirement(s). Include only the requirements that would typically be included in the job posting and would be acquired prior to the commencement of the position. Do not include courses that are needed to maintain a professional designation.

- ☐ No Additional requirements
- ☐ Additional requirements obtained by course(s) of a total of 100 hours or less
- ☒ Additional requirement obtained by course(s) of a total between 101 and 520 hours
- ☐ Additional courses obtained by course(s) of more than 520 hours

ITIL® Certification at the Foundation level or higher, based on the version 3 or newer framework; Microsoft Certifications related to SharePoint, SQL Server Development & Business Intelligence, .NET Development, ASP.NET MVC, XML, HTML 5; foundation level project management training equivalent to the PMI CAPM designation content; product level certification relevant to the college information system products such as Nintex Workflow

2. Experience

Experience refers to the minimum time required in prior position(s) to understand how to apply the techniques, methods and practices necessary to perform this job. This experience may be less than experience possessed by the incumbent, as it refers only to the minimum level required on the first day of work.

Check the box that best captures the typical number of years of experience, in addition to the necessary education level required to perform the responsibilities of the position and, in the space provided, describe the type of experience. Include any experience that is part of a certification process, but only if the work experience or the on-the-job training occurs after the conclusion of the educational course or program.

- ☒ Minimum of three (3) years

Performing software development using Microsoft technologies and programming tools such as .NET, SQL Server T-SQL, SQL Server Integration Services, ASP.NET MVC, HTML 5, XML, SQL Server Reporting Services and 3rd party tools such as Nintex Workflow

3. Analysis and Problem Solving

This section relates to the application of analysis and judgment within the scope of the position.

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The following charts help to define the level of complexity involved in the analysis or identification of situations, information or problems, the steps taken to develop options, solutions or other actions and the judgment required to do so.

Please provide up to three (3) examples of analysis and problem solving that are regular and recurring and, if present in the position, up to two (2) examples that occur occasionally:

	#1 regular & recurring
Key issue or problem encountered.	A program procedure fails to complete successfully. For example if there is a workflow process that automates the review and approval of documents and it is not completing due to an intermittent error, the incumbent will need to apply diverse technical and analytical skills to investigate and resolve the issue.
How is it identified?	Operational monitoring, observation while completing the task or procedure
Is further investigation required to define the situation and/or problem? If so, describe.	Yes, often a symptom of the problem is identified but further investigation is required to determine the scope and impact of the issue as well as to identify root cause and resolution
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Drawing on a number of resources including past experience, reference material, organizational knowledge and 3 rd party support services the issue will be analyzed to determine a solution, identify the root cause and potentially identify options for future avoidance of subsequent reoccurrences of the issue
What sources are available to assist the incumbent finding solution(s)? (eg. past practice, established standards or guidelines.)	Internet, 3 rd party support, ITS staff, organizational knowledge, product documentation, Project Managers, and the Director of Information Systems

3. Analysis and Problem Solving

	#2 regular & recurring
Key issue or problem encountered.	A project task is assigned that requires research and problem solving to successfully complete. An example of a project task that could be assigned to the incumbent is 'Research and develop a system to handle registrations for a group of online courses'. There is an expectation that the incumbent can complete loosely defined complex project tasks but that their work is subject to oversight by the specific project manager assigned to the given project.
How is it identified?	The project task outcome and boundary acceptance parameters are identified by the project manager but without necessarily having a specific solution identified
Is further investigation required to define the situation and/or problem? If so, describe.	Yes, often there will need to be further communication and clarification required to determine detailed requirements for successfully completing the project task as well as research into both technical and non-technical aspects of a solution
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Drawing on experience, reference material, organizational knowledge, 3 rd party support services and consultation with project team members and project stakeholders the project task requirements and solution options will be analyzed to determine a course of action towards a successful outcome in completion of the project task
What sources are available to assist the incumbent finding solution(s)? (eg. past practice, established standards or guidelines.)	Internet, 3 rd party support, ITS staff, organizational knowledge, product documentation, Project Managers, and the Director of Information Systems

	#3 regular & recurring
Key issue or problem encountered.	An incident is identified related to an information system that

How is it identified?

causes a disruption of service or operational failure. An example of resolving an incident could include investigating why a web application does not perform correctly in a specific version of a web browser.

Support ticket, operational monitoring, direct communication from ITS staff or other stakeholder

Is further investigation required to define the situation and/or problem? If so, describe.

Yes, often a symptom of the problem is identified but further investigation is required to determine the scope and impact of the incident as well as to identify root cause and resolution

Explain the analysis used to determine a solution(s) for the situation and/or problem.

Drawing on experience, reference material, organizational knowledge and 3rd party support services the incident will be analyzed to determine a solution, identify the root cause and potentially identify options for future avoidance of subsequent reoccurrences of the incident.

What sources are available to assist the incumbent finding solution(s)? (eg. past practice, established standards or guidelines.)

Internet, 3rd party support, ITS staff, organizational knowledge, product documentation, Project Managers, and the Director of Information Systems

3. Analysis and Problem Solving

Key issue or problem encountered.

#1 occasional (if none, please strike out this section)

New development tools, techniques, methodologies and standards become available and must be evaluated to determine suitability for adoption by the Information Systems team.

How is it identified?

Through proactive research and activities to develop and maintain competencies and certifications.

Is further investigation required to define the situation and/or problem? If so, describe.

Yes, often a wide variety of resources need to be reviewed and understood to determine the merit of adopting the new solutions. Often complex issues are involved and individual sources of information will present incomplete information, so multiple sources of information will need to be obtained and analyzed.

Explain the analysis used to determine a solution(s) for the situation and/or problem.

The incumbent will need to apply computer science and information systems guiding principles as well as knowledge about generally accepted industry standards to interpret and analyze the new solutions and arrive at conclusions.

What sources are available to assist the incumbent finding solution(s)? (eg. past practice, established standards or guidelines.)

Primarily the incumbent will rely on their education and experience to assess a variety of external resources available via the Internet. Since the quality of resources available will vary greatly it is critical that the incumbent has strong analytical and problem solving skills to assess these situations since poor decisions can have a significant impact to future results.

4. Planning/Coordinating

Planning is a proactive activity as the incumbent must develop in advance a method of acting or proceeding, while coordinating can be more reactive in nature.

In the following charts, provide up to three (3) examples of planning and/or coordinating that are regular and recurring to the position, up to two (2) examples that occur occasionally:

List the project and the role of the incumbent in this activity.

#1 regular and recurring

In delivering a new information system the incumbent may be involved in performing development of new solutions.

What are the organizational and/or project management skills needed to bring together and integrate this activity?

The incumbent will rely on an understanding of project management principles to help coordinate their own work activities and resolve contention between their own deliverable deadlines.

List the types of resources required to complete this task, project or activity.

Generally the incumbent only needs the requirements for the new solution along with direction related to the relative priority of their project deliverables.

How is/are deadline(s) determined?

Deadlines for the tasks are determined by project the project manager in consultation with the incumbent. Since the incumbent will be providing estimates for their own work effort and will provide projections of completion dates based on an understanding of the relative priority of their project deliverables it is often a case of these estimates informing the project manager of a reasonable estimated completion date as opposed to a fixed deadline.

Who determines if changes to the project or activity are required? Who determines whether these changes have an impact on others? Please provide concrete examples.

The project manager and the incumbent communicate about the project tasks assigned. There may be mandated changes that are communicated by the project manager to the incumbent such as a change to the relative priority of their project deliverables, to cancel a particular task or to change the scope of a task to reflect an overall change in scope of the project.

5. Guiding/ Advising Others

This section describes the **assigned responsibility** of the position to guide or advise others (e.g. other employees, students). Focus the actions taken (rather than the communication skills) that directly assist others in the performance of their work skill development.

Though support staff cannot formally “supervise” others, there may be a requirement to guide others using the incumbent’s job expertise. This is beyond being helpful and providing ad hoc advice. It must be an assigned responsibility and must assist or enable others to be able to complete their own tasks. Check the box(es) that best describe the level of responsibility assigned to the position and provide an example(s) to support the selection, including the positions that the incumbent guides or advises.

**Regular &
Recurring**

Occasional

Level

Example



There is a need for the incumbent to demonstrate correct processes/ procedures to others so that they can complete certain tasks

Demonstration of correct procedures to ITS staff in the case of a developed solution for to the first response team at the IT Service Desk. Demonstrating correct operating procedures to key functional owners of a new solution in transition to operations.



The incumbent recommends a course of action or makes decisions so that others can perform their day-to-day activities.



The incumbent is an active participant and has ongoing involvement in the progress of others with whom he/she has the responsibility to demonstrate correct processes/procedures or provide direction.



The incumbent is responsible for allocating tasks to others and recommending a course of action or making necessary decisions to ensure the tasks are completed.

6. Independence of Action

Please illustrate the type of independence or autonomy exercised in this position. Consideration is to be given to the degree of freedom and constraints that define the parameters in which the incumbent works.

What are the instructions that are typically required or provided at the beginning of a work assignment?	
Regular and Recurring	Occasional (If none, please strike out this section)
Day-to-day activities are performed independently according to specific project goals and solution objectives. The incumbent is responsible for managing their work activities to meet the defined expectations for their project and solution deliverables. The incumbent will be provided with some requirements for their deliverables but will often have to perform analysis and problem solving to arrive at more specific requirements that fall within the broad goals and objectives defined for them.	
What rules, procedures, past practices or guidelines are available to guide the incumbent?	
Regular and Recurring	Occasional (If none, please strike out this section)
Generally the incumbent will have to rely on industry practices and departmental standards for the solutions that they are developing.	
How is work reviewed or verified (e.g. Feedback from others, work processes, supervisor)?	
Regular and Recurring	Occasional (If none, please strike out this section)
Work is regularly reviewed against the specific goals and objectives by the project manager, project stakeholders and ITS management team.	

6. Independence of Action

Describe the type of decisions the incumbent will make in consultation with someone else other than the supervisor.	
Regular and Recurring	Occasional (If none, please strike out this section)
Decisions about solution requirements and specifications to achieve defined objectives will often be made in consultation with the project manager, project stakeholders and ITS management team.	
Describe the type of decisions that would be decided in consultation with the supervisor.	
Regular and Recurring	Occasional (If none, please strike out this section)
Decisions with potential change implications to existing ITS policies, decisions requiring major system shutdowns or service interruptions, and decisions related to budget allocation.	
Describe the type of decisions that would be decided by the incumbent.	
Regular and Recurring	Occasional (If none, please strike out this section)
The incumbent is responsible for the completion of tasks related to the development of software. It is expected that the incumbent will independently make decisions on a daily basis on how to complete or adjust software deliverables or to resolve support incidents in order to meet defined goals	

and objectives. The incumbent is expected to adjust their activities based on a change in the relative priority of deliverables, a change in deliverable scope or other deliverable constraints.

7. Service Delivery

This section looks at the service relationship that is an assigned requirement of the position. It considers the required manner in which a position delivers service to customers. It is not intended to examine the incumbent's interpersonal relationship with those customers and the normal anticipation of what customers want and then supplying it efficiently. It considers how the request for service is received and the degree to which the position is required to design and fulfill the service requirement. A "customer" is defined in the broadest sense as a person or groups of people and can be internal or external to the College.

Information on the service		Customer	Frequency (D,W,M,I)*
How is it received?	How is it carried out?		
A project manager communicates a high level objective for a new solution deliverable for a project.	The incumbent must consider both the stated and unstated requirements for the deliverable. For example in developing a new solution deliverable for students to use as part of an information system the incumbent needs to be able to anticipate a number of unstated requirements since it is not often feasible to obtain direct input from the student population as a whole. An example of this may be making sure that the solution works well with a variety of types of mobile computing devices that are in use by the students and not just the computers provided by the college. It is expected that the incumbent can perform analysis of the use of the solution to determine customer requirements, both in consultation with the customer but also in an anticipatory manner.	Students, faculty, other college staff.	D

8. Communication

In the table below indicate the type of communication skills required to deal effectively with others. Be sure to list both verbal (e.g. exchanging information, formal presentations) and written (e.g. initiate memos, reports, proposals) in the section (s) that best describes the method of communication.

Communication Skill/Method	Example	Audience	Frequency (D,W,M,I)*
Exchanging routine information, extending common courtesy	Responding to support tickets. The incumbent will need to provide information in response to IT support tickets on a frequent basis.	Staff	D
Explanation and interpretation of information or ideas	As part of day-to-day activities the incumbent will routinely communicate via email and in person during meetings in order to express ideas about solutions, and to explain aspects of specific solution proposals.	Staff	D
Imparting technical information and advice	Providing a formal written specification for a new solution design. When presented by a high level objective for a new solution project deliverable the incumbent will frequently need to perform research and requirements gathering in order to develop a formal specification for the new solution prior to initiating work on developing the solution. It is expected that by providing detailed specifications the incumbent can explain to other ITS staff and project stakeholders what will be developed. It is important that the incumbent can clearly articulate the specifications and obtain an understanding of the specifications prior to conducting development efforts in order to maximize value delivery and avoid waste associated with developing solutions that do not meet stakeholders' expectations.	Staff	D

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Instructing or training	Creating an instruction / training document on how to operate a new solution that the incumbent developed. While this may not be a document in a final form for end users, the incumbent is responsible for instructing and training other staff in relation to new solutions that are developed.	Staff	M
Obtaining cooperation or consent	Create and present a proposal to change Information Systems team development standards. Since the incumbent is continually dedicating time to perform research, develop and maintain competencies it is expected that the incumbent will formally share ideas within the Information Systems team in order to influence team development standards. It is important that in cases where it is justifiable that the incumbent can clearly articulate the rationale for change and gain the support of others in the team through effective communication techniques.	Staff	M
Negotiating			

9. Physical Effort

In the tables below, describe the type of physical activity that is required on a regular basis. Please indicate the activity as well as the frequency, the average duration of each activity and whether there is the ability to reduce any strain by changing positions or performing another activity. Activities to be considered are sitting, standing, walking, climbing, crouching, and lifting and/or carrying light, medium or heavy objects, pushing, pulling, working in an awkward position or maintaining one position for a long period.

Physical Activity	Frequency (D,W,M,I)*	Duration			Ability to reduce strain		
		< 1 hr at a time	1-2 hrs at a time	> 2 hrs at a time	Yes	No	N/A
Processing information with steady mouse and keyboard usage	D			X	X		
Sitting for long periods of time, but with the ability to reduce strain by taking breaks and changing posture.	D			X	X		

* D = Daily W = Weekly M = monthly I = Infrequently

If lifting is required, please indicate the weights below and provide examples.

☐ Light (up to 5 kg or 11 lbs.)

10. Audio Visual Effort

Activity #1	Frequency (D,W,M,I)*	Average Duration		
		Short < 30 min	Long up to 2 hrs.	Extended > 2 hrs
Reviewing detailed output from event logs or software processes where important details may be embedded inside a lot of irrelevant information. Performing detailed review of programming code to resolve issues.	D			X
Can concentration or focus be maintained throughout the duration of the activity? If not, why?				
☐ Usually				
☒ No – interruptions are unavoidable due to shared office spaces and duration of activities				
Activity #2	Frequency	Average Duration		

	(D,W,M,I)*	Short < 30 min	Long up to 2 hrs.	Extended > 2 hrs
Performing operational procedures with significant impacts possible if performed incorrectly.	D			X
Can concentration or focus be maintained throughout the duration of the activity? If not, why?				
☐ Usually				
☒ No – interruptions are unavoidable due to shared office spaces and duration of activities				

Activity #3	Frequency (D,W,M,I)*	Average Duration		
		Short < 30 min	Long up to 2 hrs.	Extended > 2 hrs
Reading technical information related to software development tools, languages or code examples	D			X
Can concentration or focus be maintained throughout the duration of the activity? If not, why?				
☐ Usually				
☒ No – interruptions are unavoidable due to shared office spaces and duration of activities				

11. Working Environment

Please check the appropriate box(es) that best describes the work environment and the corresponding frequency and provide an example of the condition.

Working Conditions	Examples	Frequency (D,W,M,I)*
☒ acceptable working conditions (minimal exposure to the conditions listed below)	The incumbent is required to sit for 7 hours less two 15 minute breaks (and lunch) per day with considerable exposure to computer and electronic equipment. The room is generally seen as a normal shared office environment.	D
☐ smelly, dirty or noisy environment		
☒ travel	Inter campus travel	W
☐ working in isolated or crowded situations		
☐ other (explain)		