

Position Description Form (PDF)

College: **Sir Sandford Fleming**

Incumbent's Name: **Vacant**

Position Title: **Spatial Database and Web Application Developer (I/O)** Payband: I

Position Code/Number (if applicable): S00593

Scheduled No. of Hours: **35**

Appointment Type: **X** 12 months _____ less than 12 months

Supervisor's Name and Title: **Moez Mehdi, Manager, Advanced Technologies**

Completed by: **Moez Mehdi**

PDF Date: August 20, 2018

Last Revision:

Signatures:

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

Date:

Supervisor:

Date:

Supervisor's Supervisor:

Date:

Instructions for Completing the PDF

1. Read the form carefully before completing any of the sections.
2. Answer each section as completely as you can based on the typical activities or requirements for the position and not on exceptional or rare requirements.
3. If you have any questions, refer to the document entitled "A Guide on How to Write Support Staff Position Description Forms" or contact your Human Resources representation for clarification.
4. Ensure the PDF is legible.
5. Responses should be **straightforward and concise using simple factual statements**.

Position Summary

Provide a concise description of the overall purpose of the position.

Lead the development work for the College's Advance Research Projects including but not limited to Spatial Database and Web Application Development software by performing software development (primarily work on Geographical Information Systems (GIS) based spatial database, Agile based Web Application Development and overall System Integration and Testing) between the Industry Partners and the clients IT division with the purpose of prioritizing development tasks, challenging and clarifying business requirements and performing analysis, design and development.

Provide Functional, Technical and Business Analysis support for the College's use of Geographical Information Systems (GIS) software by designing and developing requirements, and performing systems integration with third party applications.

Support the client departments by gaining understanding of their business processes and system requirements through consultation. Research solutions to meet these requirements that fit the priorities and resources of the College, and then promote and deploy these solutions that may involve deploying a new solutions from the College vendor (currently Microsoft), in-house design and development of a new components, purchasing and integrating a third party application, or managing vendor contracted services.

Support industry partner and client departments with product knowledge transfer by assisting in training, preparing training materials and researching product capabilities.

Further support is provided by maintaining an awareness of current industry standards and assisting the College in evolving and developing information systems that can remain compatible with, and take advantage of, the developing trends in the information processing industry.

Duties and Responsibilities

Indicate as clearly as possible the significant duties and responsibilities associated with the position. Indicate the approximate percentage of time for each duty. Describe duties rather than detailed work routines.

	Approximate % of time annually*
<p>1. Applications Development and Support</p> <ul style="list-style-type: none"> • Support business process development and enhancements in client departments by producing custom solutions when existing GIS functionality or other alternatives are not available. • Aids in the ongoing evaluation, development, and support of the College Development environment. 	30%
<p>2. Operational Support</p> <ul style="list-style-type: none"> • Provides excellent customer service to students, faculty, and staff by ensuring that all system changes are implemented with minimal service interruptions and impact to the community • Works collaboratively with Business Analysts and Technical Analysts to support the business priorities of the client departments • Provides ongoing education of client departments about updates to, and status of their GIS and related systems • Provides technical troubleshooting and resolution of GIS/ Spatial Database issues. • Communicate adequate contingency plans and resolution of issues to affected users. 	25%
<p>3. Service Representative</p> <ul style="list-style-type: none"> • Communicates effectively with client group for the purposes of knowledge transfer, trouble-shooting, requirements gathering, and project updates • Develops and maintains positive relationships with client departments by communicating frequently and effectively throughout the cycle of projects. This involves early pre-project discussions, technical and business analytical support, in-project status updates and reviews, and post-project follow-ups. 	10%
<p>4. Security</p> <ul style="list-style-type: none"> • Develops and maintains effective procedures to protect the integrity and security of staff, faculty and student personal data, student academic data, College operational data and programs in accordance with College policies, practices, and current industry standard practices. 	10%

<p>5. Maintain a set of Current GIS / Spatial database and Web-based Application Development Tools</p> <ul style="list-style-type: none"> • Ensures that the College has access to the most current and appropriate software development, integration, troubleshooting and reporting tools. This involves the research, maintenance, and support of existing tools, and ongoing research, awareness, and conversations with vendors regarding future product offerings. • Research offerings related to product and service licenses, training and support with vendors. • Works with Business Analysts, Technical Business Analysts, and College Leaders to ensure that these tools are used effectively throughout the College. 	10%
<p>6. Procedural Documentation and Report Generation</p> <ul style="list-style-type: none"> • Prepares and maintains documentation used to support the use of College information systems and for development of relevant reports • Authors knowledge base documents, presentation materials and provides documentation to support ongoing corporate training initiatives. 	10%
<p>8. Other related duties as assigned</p>	5%

* To help you estimate approximate percentages:

½ hour a day is 7%	1 hour a day is 14%	1 hour a week is 3%
½ day a week is 10%	½ day a month is 2%	1 day a month is 4%
1 week a year is 2%		

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
- 1 year certificate
- 2 year diploma
- Trade certification
- 3 year diploma / degree
- 4 year degree or 3 year diploma / degree plus professional certification
- Post graduate degree (e.g. Masters) or 4 years degree plus professional certification
- Doctoral degree

Field(s) of Study:

Computer Science, MIS, Application Development, System Programming or Geographical Information Systems

B. Check the box that best describes the requirement for 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 requirement 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 requirements obtained by course(s) of a total between 101 and 520 hours
- Additional requirements obtained by course(s) of a total of more than 520 hours

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 year 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 on-the-job training occurs after the conclusion of the educational course or program.

- Less than one (1) year
- Minimum of one (1) year
- Minimum of two (2) years
- Minimum of three (3) years
- Minimum of five (5) years

☒ Minimum of eight (8) years

Technology

- Database reporting tools, advanced user-level knowledge of RDBMS, working with multiple systems and points of integration
- Expert-level knowledge of spreadsheets, databases and project planning tools
- Advanced experience programming / technical analysis in an GIS / Web Application Development environment.
- Experience with the integration of multi-vendor hardware and software systems, networks, and client workstation configurations.

Project Management

- Previous project management experience
- Evaluating client needs, time estimates, identifying tasks (not delegating), determining priorities, tracking progress toward completion

Application Development

- Previous experience defining functional requirements and identifying technical conflicts between systems during the development or integration of new business processes
- User acceptance testing. Developing definitions of acceptance criteria
- Previous experience evaluating and vetting risks associated with Information Technology system integrations under tight timelines including issues of data security, confidentiality, and reliability of data and information.

End-User Support

- Ability to communicate effectively with technical/non-technical users for the purposes of knowledge transfer, troubleshooting, and requirements gathering
- Proven experience with troubleshooting principles, methodologies and issue resolution techniques
- Development of procedural documentation/end-user reference materials
- Previous experience supporting technical and non-technical users in a PeopleSoft environment

Training / Presentations

- Experience in delivering technical presentations
- Development of business, functional and/or technical materials for presentation and training purposes

General

- Experience working independently in a customer-service focused team within a fast-paced business environment featuring critical deadlines, multiple projects and competing priorities
- Dealing with confidential / sensitive information

3. Analysis and Problem Solving

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

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 judgement 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.	The College initiates an advanced research project which requires design and development. Due to the novelty of the program offering it is impossible to identify all integration points during the planning phase, and the system may require additional re-configuration beyond that which is normally immediately identifiable.
How is it identified?	<p>The client group (Advanced Technologies) has already assessed the system impact of this new industry partner process using their current understanding of system integration points. They are aware that there may be additional integration points but do not possess the expertise and tools to identify them.</p> <p>During development and deployment of the process, additional integration points with third party products utilizing GIS technologies from ESRI which are deeply embedded within our systems become apparent.</p> <p>The incumbent must engage in a process of repeated modification and re-modification of GIS based coding in order to adapt it to Industry Clients business processes.</p>
Is further investigation required to define the situation and/or problem? If so, describe.	Further investigation is required once an additional integration point has been identified. The incumbent will use Microsoft's Application Developer tools to investigate the issues and to analyze where critical related spatial database (which contains GIS based historical data) or staging tables are referenced or written over.

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

In order to determine the impact of new integration points the incumbent would need to determine which existing business processes and system modules are likely candidates for impact. The documentation on these processes and modules are referenced and in addition, their system tools that can be used to scan the table and variable references across wide sections of the existing client's GIS based architecture.

The impact is documented as part of the change management process and verified only after user acceptance testing. During this process pre-existing test scripts representing the new business process are completed by the client department and run through the implementation of the new process.

In addition to process and module documentation, the incumbent would create a new instance of the Microsoft Application Development environment within the Development Environment to conduct experiments in to avoid interfering with ongoing production or development/testing activities.

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

The analysis frequently involves online searches of user forums, in-house knowledge base articles, ticket system documentation and vendor documentation.

#2 Regular & Recurring

Key issue or problem encountered

Vendor Software Upgrade/Bundle Installation. Incumbent reviews GIS based Application Development and related patch documentation to determine scope of the upgrade. Incumbent must consider existing Fleming modifications and impacts on all integration points for the client system with other College systems.

How is it identified?

Most of vendors issue updates throughout the year. Information Technology services most of the operational updates and deploys them during a window identified by the client areas.

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

In addition to issuing patch notifications our vendors include extensive and detailed release notes outlining the extent of each patch. In rare security situations the release notes and notification language dictate that we apply the patch off schedule (i.e., as soon as possible).

More typically the incumbent collects and scans the vendor notes, provides a commentary where appropriate and then makes all this information available to the client business process expert for further investigation.

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

While vendor release notes can adequately assess the impact of a patch on basic, typical GIS/ Spatial Database functionality, the impact on the College's custom code and any system module interfaces must be assessed by the incumbent.

This exploration determines the scope of the patching activity and determines the amount and type of user acceptance testing that must accompany the implementation of the patch.

Release notes may contain information on integration points, but the incumbent must review College modification inventory to identify the patches which may have the most impact on the system. These patches will receive further scrutiny and analysis by the incumbent, aided by change management and system tools.

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

In addition to vendor release notes the incumbent would make extensive use of module documentations and system utilities that probe variable and table references.

3. Analysis and Problem Solving

#3 regular & recurring

Key issue or problem encountered

Incumbent receives a technical enquiry or operational problem that must be responded to in order allow the client to provide recommendations to Management, Users, for an appropriate solution. May require an examination of the Spatial Database Design and integration points with GIS systems

How is it identified?

Most requests are identified through the ticket system. There is a class of ticket specific to technical enquiries.

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

Custom Application Development using Spatial Database contains a core functionality (using a DEVELOPMENT) instance that allows technical uses to investigate basic functionality. This resource provides a hand-on demonstration of the possible solutions and is used in conjunction with available documentation.

If the proposed solution appears to be feasible, the incumbent will prepare a functional environment comprised of Fleming College data for further analysis. This environment is more functionally relevant because it has our local modifications and copies of our production data.

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

Even after configuring new modules in a separate environment, running experiments, and reading the available documentation, the behavior of the system is difficult to predict or analyze for seemingly indeterminate reasons. In these cases additional analysis is required. Process logging is enabled to track database activity in detail. In other cases the actual source code is examined and possibly altered to include additional debugging information to be written to the log files.

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

Initially previous documentation, knowledge warehouse, online sources and user groups.

If these prove insufficient, the college in partnership with industry client maintains a support agreement with our vendors. In most cases these support agreements cover some technical inquiries around product functionality and deployment.

Either the incumbent or the industry partner business process experts will open vendor support tickets and then work together to sort through the vendor responses. The incumbent works with the clients to ensure we provide all required supporting information to the vendor.

#1 occasional

Key issue or problem encountered

How is it identified?

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

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

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

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.

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

	#1 regular & recurring
List the project and the role of the incumbent in this activity.	Coordinating and tracking technical issues arising from the production use of the system within project team. The incumbent receives the request, researches the issue, plans and coordinates the solution with the requesting departments throughout all testing and deployment phases of the activity.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	Knowledge of project management skills is required. Each project has a slightly different team of contributors and stakeholders. In addition to assembling the team, the incumbent scopes the project, communicates the scope and plan to stakeholders and manages the exceptions. Progress is tracked using various tools (simple spreadsheets to detailed Microsoft Projects) and communicated back to community.
List the types of resources required to complete this task, project or activity.	The incumbent would use product documentation, module documentation, and project management tools to create the project plan. They would use existing College structures (various leader's teams) and client meetings to ensure that the priorities of various stakeholders continue to be represented.
How is/are deadline(s) determined?	When drafting a project plan the scheduling must take into account the operational activity taking place in the client department in addition to the requirements of the project itself. Typically there are only a very few windows during the project life cycle when system process changes can be deployed. This varies depending on the scope and modules being impacted. Ultimately deadlines are negotiated directly with client departments and any external services being used to complete a project. Incumbent does not assign deadlines to individuals.

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

Small (under 5 day) changes can proceed with just the approval of the Project Manager and/or Development Manager.

Larger projects are sent to the Advanced Technologies Manager who draft an annual project list for the Executive Project Sponsor.

These committees' input is required because of the inter-departmental scope of most of the system projects and because the success of the projects ultimately depends on the resources required to complete the work.

4. Planning/Coordinating

#2 regular & recurring

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

Participates in major projects such as the implementation of new modules and core system upgrades. Monitors their own project progress and any issues resolution, as needed. Collaborates with project team to meet project objectives.

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

Knowledge of project management skills are required. Each project has a slightly different team of contributors and stakeholders. The incumbent assists the project manager with scoping the project and communicating with project stakeholders. The incumbent generates project documentation as required.

Progress is tracked using various tools (simple spreadsheets to detailed Microsoft Projects) and communicated back to project team and stakeholders.

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

The incumbent collects user requirements with interviews and the creation of prototypes including examples of possible screenshots, reports, and story-boarding. The incumbent would use product documentation, module documentation, and project management tools to assist the creation of a project plan. They would use existing structures (various leaders teams) and client meetings to facilitate ongoing communications.

How is/are deadline(s) determined?

New module or functionality deployment is often influenced by the government / client / industry partner so the due date is enforced from outside the College. External funding is usually at risk so non-compliance is not an option. The incumbent would assist in scheduling their own tasks working backward from the externally specified due date and coordinating with client operational activities.

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

Deployment changes are often required even when projects are externally driven. e.g. an Academic re-organization such as the creation of academic chair positions can trigger unavoidable changes to the approval workflow specified for a Course Outline application.

The scope of the change will determine how and if the change is completed as part of the initial project or deferred to a revisit (or phase II) of the project.

The incumbent would determine the scope and therefore who needs to be consulted on in process change requests. If the incumbent can incorporate a change request into a project plan without risking a deadline, they will do so. Change requests that may impact deadlines are reviewed with the rest of the project team and stakeholders.

4. Planning/Coordinating

#3 regular & recurring

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

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

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

How is/are deadline(s) determined?

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

4. Planning/Coordinating

#1 occasional

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

Third Party Software Upgrade – GIS or Spatial Database based Technologies. Incumbent will develop implementation plan for upgrade.

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

Software Project Management skills are required. Planning will involve getting resources from vendors, Information Technology Services, and client departments coordinated without stopping the current use of the product. This effort must be coordinated so that expensive resources are not wasted. Activities are scheduled around other College priorities. The failure of the project plan could result in considerable cost and/or significant delays in resumption of normal College business. The impact on critical systems and data must be identified and incorporated into the plan.

The scope of the upgrade has to be determined, i.e., does the upgrade involve one product module or all of them? Does the upgrade involve the system interface? Does it involve the underpinning database? How does it impact local customizations that have been made?

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

Various people and skill sets must be coordinated including Technical and Business Analysts, end users, and other Web Application Development Programmers/Systems Analysts.

Data backup and computing infrastructure will be required to develop and implement plan. Technical articles discussing industry best practice will be utilized. Vendors will be consulted to determine that technical requirements of plan can be met.

How is/are deadline(s) determined?

The work required is documented in a concise project plan. The deadlines for development work are determined through negotiations with impacted client departments, effort estimates and availability of resources.

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

If the scope of a development project grows beyond the resources available to this position and the members of the functional area team, it must be forwarded to the Manager, Advanced Technologies. The additional work either gets approved or the task is deferred until it can be properly scoped, resourced, and scheduled.

As an example, if during a project that originally involved 3 weeks of coding it became apparent that an entire area of functionality was missing in the design specification this development work would not commence. It would be prioritized, resourced, and scheduled as a separate or a new development activity. Executive Project Sponsor and/or the Manager would determine the priority of work at this time.

4. Planning/Coordinating

#2 occasional

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

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

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

How is/are deadline(s) determined?

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

5. Guiding/Advising Others

This section describes the **assigned responsibility** of the position to guide or advise others (e.g. other employees, students). Focus on the actions taken (rather than the communication skills) that directly assist others in the performance of their work or 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
<input type="checkbox"/>	<input type="checkbox"/>	Minimal requirement to guide/advise others. The incumbent may be required to explain procedures to other employees or students.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	There is a need for the incumbent to demonstrate correct processes/ procedures to others so that they can complete specific tasks.	<p>Technical lead for the client's system. Regular requirements for the incumbent to explain/demonstrate a course of action to allow Technical & Business Analysts to perform their daily duties.</p> <p>First point of contact for the resolution of technical issues.</p> <p>As lead technical contact, incumbent advises and recommends a course of action for the purpose of performing day-to-day activities to other colleagues. This occurs within cross-training sessions when dealing with a new system or major systems changes.</p> <p>Support of delivered projects including ongoing support and guidance. Responsible for providing system direction & training to Technical and Business Analyst roles.</p>

- 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.

Assists user department by designing system procedures. Must analyze system functionality and recommend the best course of action for others. Coordinates the efforts of the functional work group, monitoring tasks and ensuring project stays on schedule.(not assigning tasks or deadlines)

6. Independence of Action

Please illustrate the type of independence or autonomy exercised in the 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)
Only specific goals & objectives and expected outcomes are communicated. Timelines established in keeping with key system processes and initiatives and as required to meet the deadlines established.	

What rules, procedures, past practices or guidelines are available to guide the incumbent?	
Regular and Recurring	Occasional (if none, please strike out this section)
Past practice, relevant policies & procedures, general systems and business knowledge, Collective Agreements, Scheduling Rules & Guidelines, Academic Schedule, Annual Planning Cycle, College Calendar, Industry trends and standards, technical manuals and articles, project management methodology, Higher Education Users Group.	Manager would provide minimal direction in multi-departmental projects.

How is work reviewed or verified (eg. feedback from others, work processes, Supervisor)?	
Regular and Recurring	Occasional (if none, please strike out this section)
Meetings with user groups and internal project groups. Supervisor reviews work by exception. Supervisor reviews overall outcomes at time of project completion. The system (in production) is also self-checked on a regular basis and the essential criterion of success is whether or not system development meets the articulated user needs. Projects delivered on-time, within budget.	

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)
Functionality or business process needs that impact other departments or integration points in the system architecture.	

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)
Significant functional issues/problems. Changes to project scope/budget/timelines. Staffing/resource issues related to project planning and deadlines. Decisions related to appropriate business/audit controls. Competing and incompatible requests.	

Describe the type of decisions that would be decided by the incumbent.	
Regular and Recurring	Occasional (if none, please strike out this section)
Issues escalation to Oracle/PeopleSoft directly. Determines the most appropriate solutions to recommend to Technical and Business Analysts and decision-makers to address an identified business/functional need. Establishes metrics regarding project outcomes.	

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 the 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 fulfil 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.

In the table below, list the key service(s) and its associated customers. Describe how the request for service is received by the incumbent, how the service is carried out and the frequency.

Information on the service		Customer	Frequency (D, W, M, I)*
How is it received?	How is it carried out?		
Request from a functional area regarding a technical system issue.	Incumbent investigates to identify true nature of the issue. Examine process, data and other system elements and impacts of the issue. Recommend and implement solutions (e.g. data fix)	Technical & Business Analyst, Client Stakeholders	D
System configuration and acceptance testing.	Engages rigorous functional and acceptance testing to ensure the integrity of business process & data. Documents as appropriate.	Technical & Business Analyst, Client Stakeholders	M
College administrative computing system production issues. May involve a new software development request.	Consulting with client department to determine requirements. Research solutions to meet these requirements and then promote and deploy solutions that may involve deploying a new module from the College Administrative System vendor, in-house design and development of a customized component, purchasing and integrating a third party application, or managing vendor contracted services. Using Software project management techniques adopted by Fleming.	Client department.	W

Request from Manager (this position's supervisor)	Incumbent must investigate and analyze options in order to determine a solution. Incumbent must use their expertise, experience and research skills to anticipate and resolve problems that may impede the customer's needs. Service is then delivered. Best practices, technical documentation and industry standards may be referenced. For example, an engineer may request that the Manager standardize sound (.wav) files received from testing sites. The Manager would ask the Spatial Database/Web Application Developer to create a process that would capture geo-spatial, technical and business information and automate the sound.	Faculty, staff and students.	I
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* D = Daily W = Weekly M = Monthly I = Infrequently

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	<p>Computer questions related most often to use of College computing resources.</p> <p>Networking at conferences or with product user-groups.</p>	<p>College Community</p> <p>Peers at other institutions (HEUG – Higher Ed User's Group), other Canadian Universities and Colleges</p>	<p>D</p> <p>W</p>

Explanation and interpretation of information or ideas	Providing updates re: Support/Problem resolution.	Client staff, ITS staff	D
	Sharing information, offering solutions, guidance, follow up and collaboration on projects	Government (e.g., OCAS), Colleagues at other institutions	M
	Application data exchange, liaison, reporting techniques, and solution sharing	Co-workers and Colleagues at other institutions	M

Imparting technical information and advice	Discussions regarding specific functionality of the system. Discussions with end-users on possible changes to the system, procedural use of the system, and/or system trouble-shooting.	Other ITS; Departmental Leaders, Technical and Business Analysts; end-users	D
	Discussions regarding problems with systems or possible changes to systems, how to use system, troubleshooting.	Other ITS; Departmental Leaders, Technical and Business Analysts; end-users	W
	Support/Problem resolution and services. Imparting functional or procedural clarifications or facilitating informal learning opportunities.	Other ITS; Departmental Leaders, Technical and Business Analysts; end-users	W
	Implementation of new systems may involve changes to business process which must be explained to various stakeholders.	Other ITS; Technical and Business Analysts; end-users	I
	Software needs and requirements support/problem resolution and services	Technical and Business Analysts, Leaders in service departments	W
	Administering Support contracts	External vendors.	I
	Information System Changes, Service outages, updates.	All staff, faculty and students.	W
	Obtaining technical support and information	Application vendors (Oracle, ESRI, Microsoft)	
Instructing or training			
Obtaining cooperation or consent			
Negotiating			

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

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, 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
Sitting at a desk / computer	D			X	X		
Typical usage of a PC including keyboarding and mouse usage	D			X	X		
Lifting	W	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)
- Medium (between 5 to 20 kg or 11 to 44 lbs)
- Heavy (over 20 kg or 44 lbs)

Manuals, printouts, equipment

10. Audio Visual Effort

Describe the degree of attention or focus required to perform tasks taking into consideration:

- the audio/visual effort and the focus or concentration needed to perform a task and the duration of the task, including breaks (e.g. up to 2 hours at one time including scheduled breaks)
- impact on attention or focus due to changes to deadlines or priorities
- the need for the incumbent to switch attention between tasks (e.g. multi-tasking where each task requires focus or concentration)
- whether the level of concentration can be maintained throughout the task or is broken due to the number of disruptions

Provide up to three (3) examples of activities that require a higher than usual need for focus and concentration.

Activity #1	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Developer-level functional testing following a system upgrade or patch. Trouble-shooting variance reports.	I		X	
Can concentration or focus be maintained throughout the duration of the activity? If not, why? <input type="checkbox"/> Usually <input checked="" type="checkbox"/> No – High priority interruptions are common due to production issues mainly but there are also telephone inquiries and walk up traffic from co-workers and technical leads in service departments.				

Activity #2	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Resolving information broker or other PeopleSoft internal networking problems. (Error messages, batch processes failing, positng from GL not working, etc)	M		X	
Can concentration or focus be maintained throughout the duration of the activity? If not, why? <input type="checkbox"/> Usually <input checked="" type="checkbox"/> No – High priority interruptions are common due to production issues mainly but there are also telephone inquiries and walk up traffic from co-workers and technical leads in service departments.				

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

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)*
<input checked="" type="checkbox"/> acceptable working conditions (minimal exposure to the conditions listed below)	Office environment	D
<input type="checkbox"/> accessing crawl spaces/confined spaces		
<input type="checkbox"/> dealing with abusive people		
<input type="checkbox"/> dealing with abusive people who pose a threat of physical harm		
<input type="checkbox"/> difficult weather conditions		
<input type="checkbox"/> exposure to extreme weather conditions		
<input type="checkbox"/> exposure to very high or low temperatures (e.g. freezers)		
<input type="checkbox"/> handling hazardous substances		
<input type="checkbox"/> smelly, dirty or noisy environment		
<input checked="" type="checkbox"/> travel	Position be required to travel to other client sites for various functions of GIS / Development support occasionally (max 1/month)	I
<input type="checkbox"/> working in isolated or crowded situations		
<input type="checkbox"/> other (explain)		

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