



IDENTIFICATION

Department	Position Title	
Aurora College	Programmer/Systems Analyst	
Position Number	Community	Division/Region
91-14899	Fort Smith, NT	Education & Training

PURPOSE OF THE POSITION

The Programmer/Systems Analyst (P/SA) is responsible for planning, designing, and implementing software programs, as well as conducting system analysis on information systems, and acts as a coordinator in the design, development, implementing, testing and upgrading of those systems. The P/SA will apply proven communication, analytical and problem-solving skills to help identify, communicate and resolve systems issues to maximize the benefit of systems investments and to ensure critical workflows at the College are sustained. This includes eliciting requirements, designing, documenting, and modifying software specifications throughout the Systems Development Lifecycle (SDLC). The P/SA will also analyze and amend software errors in a timely and accurate fashion for system sustainment and provide status reports for projects where required.

SCOPE

The incumbent reports directly to the Manager, Information Systems and Technology. The P/SA works directly with the other members of the Information Systems and Technology team, software vendors, and has a functional reporting relationship with the Vice President, Student Affairs and Registrar. The incumbent may also work directly with Education, Culture, and Employment (ECE) Information Systems and Program Area staff as required.

The incumbent is the in-house senior technical resource for programming and systems analysis. This position provides specialized tier two support for all of the College’s information systems and coordinates with software vendors to perform complex system upgrades and enhancements that have the potential to impact all staff and students at the College.

The incumbent’s primary roles are to plan and manage complex system upgrades and software enhancement requests from end-users, provide complex tier two technical support to resolve data and functional problems for all College staff and faculty, and design, develop, and support the technical architecture needed to integrate College systems.

The incumbent must ensure that systems integrate seamlessly without error, including data and workflows, between the financial system, email system, library system, student computer accounts, learning management system, and other systems at the College. The incumbent designs and develops reports or data extracts when needed.

This position must use proven industry best-practice techniques associated to the SDLC, such as, change management strategies to facilitate system transitions and deployments, project management methods to ensure upgrades are planned and coordinated, requirements elicitation to determine the scope and complexity of system enhancements, and business process modelling techniques to ensure workflows and work processes at Aurora College are aligned and working efficiently to maximize the capability of the system.

The Student Information System (SIS) is the largest and most complex of the portfolio of applications requiring business and system analysis. This complex system has approximately 4000 end-users and is used throughout all Aurora College campuses and Community Learning Centres in the NWT to record details and daily event information about Aurora College students, including applications, registration, residence, course marks, attendance, program completion, and transcripts. Students and applicants to Aurora College use the SIS for services, including program application and registration and making payments on their accounts.

The incumbent must have highly effective problem-solving, analytical and organizational skills to ensure that systems are designed and developed to meet complex post-secondary education needs. He/she must become very well informed on current policies and legislation as well as in-depth knowledge of the System Development Life Cycle (SDLC), systems analysis, and software programming in a variety of programming languages. He/she must have working knowledge and understanding in business analysis and project management methods and techniques. Failure to provide adequate services and design, develop and safeguard student information may result in serious consequences for Aurora College, ECE and the government as a whole.

RESPONSIBILITIES

1. Plan and Coordinate the analysis and implementation of enhancement requests and large-scale system upgrades.

- Elicit functional and technical requirements using a variety of techniques, including but not limited to, facilitating workshops, job-shadowing, interviews, and document analysis;
- Investigate potential systems/vendors/suppliers/contractors (hardware and software) that may be able to deliver new systems based on elicited requirements;
- Perform a variety of analyses, making recommendations for implementing or upgrading systems, the feasibility of projects, and options analysis for the most suitable solutions;
- Develop and implement acceptance and evaluation criteria related to information systems and requirements;
- Ensure that solution needs are communicated to the technology group, and opportunities for improvement using technology solutions are identified;

- Employ expert data, process, use-case modelling and prototyping techniques and diagrams to ensure proposed solutions will meet desired outcomes;
- Coordinate multiple simultaneous projects from initiation to closure;
- Refine and control project scope through the creation of a schedule that defines and sequences project activities;
- Oversee the detailed design, construction, development, testing and implementation of the solution, ensuring that specifications meet client needs and technical standards and ensuring hardware and software solutions are consistent with detailed plans and design;
- Plan, generate, store, and issue project communications to ensure that all stakeholders are aware of project goals, scope, progress and concerns; and
- Report regularly the status of project scope, budget and schedule to the Manager, Information Systems and Technology; Vice President, Student Affairs; Registrar; and Aurora College Senior Management.

2. Develop and maintain College systems including maintenance of local, mobile and online applications, application servers, web servers and database servers, as well as their environments including production, user acceptance testing and development.

- Provide complex tier two technical expertise on implementation, customization and maintenance of the College software applications and systems to both end-users and vendors;
- Test, document, and communicate system changes to the stakeholders impacted, including but not limited to the Manager, VP, Student Affairs and Registrar, when implementing new upgrades to SIS or any related systems;
- Manage data integrity to reflect all business rules, policies and procedures of systems;
- Manage the structure and permissions of user-profiles, accounts, menus and screens.
- Perform data backup and recovery operations;
- Import and export data from various systems database(s) and create views as required;
- Ensure software designs conform to Aurora College, ECE and GNWT standards;
- Develop and modify custom applications in accordance with Aurora College standards;
- Ensure proper system testing completed to meet end user requirements;
- Solicit ongoing feedback from users to ensure required and reliable system performance; and
- Design, develop, and support the technical architecture needed to integrate and interface College systems seamlessly without error, including data and workflows, between the financial system, email system, library system, student computer accounts, learning management system, and other systems at the College.

3. Supports the implementation and maintenance of data interchange applications used to exchange data between Aurora College and ECE and other jurisdictions. Design, maintain and create custom reports and data extracts for Aurora College systems.

- Assist Aurora College end-users in defining report requirements from data stored in the SIS and other Aurora College systems;
- Use department supported reporting tools to create and modify reports;

- Create views and procedures as required in the database(s); and
 - Design and develop data extracts.
- 4. Provide tier one end-user support as required to clients, including College management, staff, and students. Travel to the Regions and communities may be required.**
- Provide design consultation/advice to end-users;
 - Assist in maximizing software solution capabilities; and
 - Provide end-user support to clients using help desk ticketing software.
- 5. Collaborate and liaise with others, including:**
- Aurora College and GNWT Information Systems and Technology staff;
 - Aurora College Office of the Registrar staff;
 - Aurora College faculty and students; and
 - Third-parties such as vendors on the maintenance of current systems and development/customization of new solutions.

WORKING CONDITIONS

Physical Demands

There is limited physical effort required for this position. While performing systems development and troubleshooting duties, there are long periods where the incumbent is required to remain highly focused on computer monitors that can cause back muscle and eyestrain.

Environmental Conditions

No unusual demands

Sensory Demands

The incumbent may spend long periods of intense concentration reviewing specifications, program code, data flows. Eyestrain, back discomfort and keyboard-induced tensions are the most common problems.

Mental Demands

The incumbent supports applications critical to Aurora College's operations, including the Student Information System and the Financial Information System, which may require after-hours/weekend support. The incumbent is faced with changing priorities, short time frames and is often required to work overtime to meet deadlines. This incumbent is exposed to pressure due to the tight work schedules, and changing operational priorities, all requiring intense analytical work. A high level of competency must be maintained, requiring ongoing study.

Occasional travel to remote sites and work outside the office will be required, as well as travel in small aircraft into remote communities.

KNOWLEDGE, SKILLS AND ABILITIES

- Expert knowledge of HTML, CSS, JavaScript, and SQL programming/markup languages. (Experience working with Microsoft SQL would be an asset);
- Expert knowledge of programming languages such as PL/SQL, .VB.NET, ASP, or Python;
- Expert knowledge of software development and hardware capabilities and requirements, including delivery platform/technical architecture;
- Expert knowledge of relevant operating systems, hardware environments, software packages, database concepts and tools and data modelling tools;
- Working knowledge of reporting tools including Microsoft SQL Server Reporting, Oracle Reports, Crystal Reports or Jasper Reports;
- Working knowledge of and ability to apply project management best practices in information systems including analysis, design, development, implementation, support, evaluation and life cycle management;
- Working knowledge of business analysis skills, including the ability to elicit requirements, facilitate needs assessment workshops, and prepare system design specifications;
- Excellent priority-setting and organizational skills, including the ability to manage multiple projects efficiently and effectively using project management tools and methods;
- Excellent verbal and presentation communications skills, including the ability to translate complex technical information into plain language for Senior Managers and systems users; and
- Excellent written communication skills, including the ability to develop complex technology business and strategic plans in plain language.

Typically, the above qualifications would be attained by:

(Insert the ideal combination of education and experience required for the position.)

The required level of knowledge, skills and ability is typically acquired through the completion of a University Degree in Computer Science or Information Systems Management and at least three (3) years of experience in the Information Technology industry, including at least two years as a System Analyst. A combination of seven (7) years of education and directly related experience would be considered as an equivalency.

The following would be an asset, but not mandatory:

- Extensive knowledge of Adult Learning Theory and Practice
- Extensive knowledge of Northern Aboriginal people and communities
- Ability to work effectively with Northern Aboriginal communities and organizations
- Extensive knowledge of post-secondary Education and a post-secondary Education environment

ADDITIONAL REQUIREMENTS

Position Security (check one)

- No criminal records check required
- Position of Trust – criminal records check required
- Highly sensitive position – requires verification of identity and a criminal records check

French language (check one if applicable)

- French required (must identify required level below)
Level required for this Designated Position is:
ORAL EXPRESSION AND COMPREHENSION
Basic (B) Intermediate (I) Advanced (A)
READING COMPREHENSION:
Basic (B) Intermediate (I) Advanced (A)
WRITING SKILLS:
Basic (B) Intermediate (I) Advanced (A)
- French preferred

Indigenous language: Select language

- Required
- Preferred

CERTIFICATION

Title: Programmer/Systems Analyst

Position Number: 91-14899

<hr/> <p>Employee Signature</p> <hr/> <p>Printed Name</p> <hr/> <p>Date</p> <p><i>I certify that I have read and understand the responsibilities assigned to this position.</i></p>	<hr/> <p>Supervisor Signature</p> <hr/> <p>Printed Name</p> <hr/> <p>Date</p> <p><i>I certify that this job description is an accurate description of the responsibilities assigned to the position.</i></p>
<p>Tom Weegar</p> <hr/> <p>Deputy Head/Delegate Signature</p> <p><i>I approve the delegation of the responsibilities outlined herein within the context of the attached organizational structure.</i></p>	<p>January 10, 2020</p> <hr/> <p>Date</p>

The above statements are intended to describe the general nature and level of work being performed by the incumbents of this job. They are not intended to be an exhaustive list of all responsibilities and activities required of this position.