



IDENTIFICATION

Department	Position Title	
Aurora College	Programmer/Systems Analyst	
Position Number	Community	Division/Region
91-14899	Fort Smith	Corporate Services & Administration

PURPOSE OF THE POSITION

The Programmer/Systems Analyst (P/SA) is responsible for planning, designing, and implementing software programs; system analysis on information systems; and coordinating the design, development, implementation, testing and upgrading of those systems. The P/SA identifies, communicates, and resolves systems issues or software errors in a timely fashion to maximize the benefit of systems investments and ensure critical workflows at the College are sustained. The position manages the full Systems Development Lifecycle (SDLC), which includes eliciting requirements, designing, documenting, and modifying software specifications.

SCOPE

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

The incumbent is the in-house senior technical resource for programming and systems analysis. This position provides specialized support (tier 3+) for all of the College's information systems and coordinates with software vendors to perform complex system upgrades, manages software enhancements that have the potential to impact all staff and students at the College, and supports 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. The P/SA 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. The incumbent must have 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. Implements IT enhancements and large-scale system upgrades.

- Identifies functional and technical requirements using a variety of techniques, including but not limited to, facilitating workshops, job-shadowing, interviews, and document analysis.
- Identifies and investigates potential systems, vendors, suppliers, and/or contractors (hardware and software) that may be able to deliver new systems based on elicited requirements.
- Analyses options/alternatives, recommends solutions or upgrades, and assesses project feasibility.
- Develops and implements acceptance and evaluation criteria related to information systems and requirements.
- Communicates opportunities for improvement and solution needs to the technology group.
- Employs expert data, process, use-case modelling and prototyping techniques/diagrams to ensure proposed solutions will meet desired outcomes.
- Manages multiple simultaneous projects from initiation to closure.
- Refines and controls project scope through the creation of a schedule that defines and sequences project activities.

- Oversees the detailed design, construction, development, testing and implementation of IT solutions, ensuring specifications meet client needs, technical standards and hardware/software solutions are consistent with detailed plans and design.
- Documents and communicates system upgrades or changes to impacted stakeholders.
- Plans, generates, stores, and issues project communications to ensure that all stakeholders are aware of project goals, scope, progress, and concerns.
- Reports project status, scope, budget and schedule to the Manager, Information Systems and Technology and other applicable leaders at the College.

2. Designs, develops, and oversees IT architecture, infrastructure, integration, and application environments.

- Designs, develops, and supports 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.
- Provides complex technical expertise on implementation, customization and maintenance of the College software applications and systems to both end-users and vendors.
- Manages data integrity to reflect all business rules, policies, and procedures of systems.
- Manages the structure and permissions of user-profiles, accounts, menus, and screens.
- Performs data backup and recovery operations.
- Designs and develops data extracts. Imports and exports data from various systems database(s) and creates views as required.
- Develops and modifies custom applications in accordance with Aurora College standards and ensures proper system testing completed to meet end user requirements.
- Ensures software designs conform to Aurora College, ECE and GNWT standards.
- Proactively monitors for high availability and assists in disaster recovery planning.

3. Maintains IT expertise and provides IT application support services.

- Supports faculty/staff in defining report requirements from data stored in the SIS and other Aurora College systems; and uses department supported reporting tools to create and modify reports.
- Solicits ongoing feedback from users to ensure required and reliable system performance.
- Provides design consultation/advice and software solution capabilities to end-users.
- Supports and resolves escalated end-user requests via help desk ticketing software.

4. Contributes to the effectiveness, safety, and reputation of the College.

- Upon request, creates reports, analyses, budgets, and/or briefings in support of department operations.
- Complies with all institutional policies and applicable legislation.
- Provides input and pertinent information to others for new projects, initiatives, and future training plans as required. May undertake special projects, as assigned by the Manager, IST.

- May support, or provide input to, events and presentations that promote Aurora College's activities, programs, and offerings to others. Acts as an ambassador by promoting Aurora College's programs and image.
- Escalates safety concerns to supervisor.
- Fosters a supportive learning/working environment and assists other staff/faculty as needed.
- Attends team-building functions and regular department meetings, which may be face-to-face or virtual. At times, the incumbent may be asked to chair or take minutes at meetings.
- Participates in an appropriate share of institutional service assignments, such as participating in committees.
- Documents professional development plan and required training needs.

WORKING CONDITIONS

Physical Demands

No unusual demands.

Environmental Conditions

No unusual demands.

Sensory Demands

No unusual demands.

Mental Demands

Occasional travel is required.

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.
- Excellent written communication skills, including the ability to develop complex technology business and strategic plans in plain language.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

Typically, the above qualifications would be attained by:

A bachelor's degree in computer science or information systems and 3 years work experience in IT that includes at least 2 years as a System Analyst.

Equivalent combinations of education and experience will be considered.

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