



Canadian  
Supply Chain  
Sector Council

Conseil canadien  
sectoriel de la chaîne  
d'approvisionnement

## OCCUPATIONAL STANDARD

(For use in the development of supply chain related job descriptions, performance evaluations, career development plans, etc.)

<b>Position:</b>	<b>INFORMATION SYSTEMS ANALYST</b>
<b>Description of Position (As defined by the CSCSC Stakeholder Community)</b>	<i>Information Systems Analysts conduct research, develop and implement information systems development plans, policies and procedures, and provide support on a wide range of information systems issues.</i>
<b>Position Development</b>	Progression to supervisory and management positions is possible through experience and with additional training.
<b>Required Qualifications:</b>	<b>(Education, Training, Related Work Experience)</b>
<b>Education</b>	A bachelor's degree in computer science, computer systems engineering, software engineering, business administration or a related discipline, or completion of a college program in computer science is usually required.
<b>Training</b>	Certification or training provided by software and/or hardware providers may be required by some employers. In addition, there may be a need for recertification and upgrading of skill sets.
<b>Related Work Experience</b>	Experience designing and managing information systems, associated business processes, and hardware is usually required. Direct experience working with software providers is considered beneficial.
<b>Tasks:</b>	
<b>Information Systems Analysts perform some or all of the following tasks</b>	<ul style="list-style-type: none"> <li>• Information technology enablement for key supply chain business processes</li> <li>• Provide advice on information systems strategy, policy, management, security and service delivery</li> <li>• Assist in assessing physical and technical security risks to data, software and hardware, and assist in developing policies, procedures and plans to minimize the effects of security breaches</li> <li>• Confer with staff and users to identify and document requirements</li> </ul>

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	<ul style="list-style-type: none"> <li>• Conduct tasks in a team matrix environment</li> <li>• Retain updated knowledge of and compliance with applicable regulations</li> <li>• Assist in conducting business and technical studies</li> <li>• Assist in the design, development, and integration and implementation of creative information systems business solutions</li> <li>• Interface with suppliers and vendors to evaluate software and hardware as required</li> <li>• Test, maintain, analyze and monitor computer programs and systems, including coordinating the installation of computer programs and systems</li> <li>• Assist in the coordination and linkage of computer systems within an organization to increase compatibility and information sharing</li> <li>• Maximize the efficiency, effectiveness and overall quality of information systems</li> <li>• Conduct independent third-party reviews to assess information systems</li> <li>• Provide computer systems and programs training as required</li> <li>• Maintain technical currency and apply new knowledge to the position and associated tasks</li> </ul>
<b>Tools and Technology:</b>	
	<ul style="list-style-type: none"> <li>• Computer Hardware, Peripherals, and Associated Computer Software (i.e. configuration management, information systems management system, development environment, object or component oriented development, program testing, web platform development, enterprise resource planning, graphics, electronic mail, word processing, spreadsheet, presentation)</li> <li>• Personal Digital Assistants (PDAs) or Organizers</li> <li>• Communication Devices</li> </ul>
<b>Required Competencies:</b>	<b>(Knowledge, Skills, Personal Attributes)</b>
<b>Knowledge</b>	Information Systems Analysts should have knowledge of computers and electronics, English language, other applicable languages, customer and personal service, design, telecommunications, mathematics, and education and training.
<b>Skills</b>	Information Systems Analysts should have the following skill sets: active learning and listening, reading comprehension, complex

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	problem solving, critical thinking, troubleshooting, performance monitoring, service orientation, time management, and quality control analytical skills.
<b>Personal Attributes</b>	<b>(Abilities, Work Values, Work Styles)</b>
<b>Abilities</b>	The following abilities are important to the role of Information Systems Analyst: oral expression and comprehension, problem sensitivity, inductive and deductive reasoning, written comprehension, speech clarity and recognition, and information ordering.
<b>Work Values</b>	Individuals who will succeed in this position: <ul style="list-style-type: none"> <li>• work independently and are comfortable making decisions,</li> <li>• are results oriented, and</li> <li>• enjoy a stable work environment.</li> </ul>
<b>Work Styles</b>	The following work styles are attributable to an Information Systems Analyst: adaptability/flexibility, attention to detail, analytical thinking, persistence, dependability, initiative, cooperation, achievement of challenging goals, and stress tolerance.
<b>Essential Skills Profile:</b>	Essential Skills are the skills needed for work, learning and life. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. For more detailed essential skills profiles please refer to the HRSDC website: <a href="http://www.hrsdc.gc.ca/en/workplaceskills/essential_skills/index.shtml">www.hrsdc.gc.ca/en/workplaceskills/essential_skills/index.shtml</a>
<b>Reading Text</b>	<ul style="list-style-type: none"> <li>• Read and interpret lengthy passages of computer language code</li> <li>• Read about new products in marketing materials such as brochures, pamphlets and product information sheets</li> <li>• Read comments, suggestions and responses to frequently asked questions posted on Internet 'listservs' and forums</li> <li>• Read about new technologies and their applications in professional journals, industry magazines and periodicals</li> <li>• Read about information systems applications, application platforms, computer languages and hardware in reference and technical manuals</li> <li>• Read about information systems development projects and requirements in documents such as requests for proposals, business plans and reports</li> </ul>
<b>Document Use</b>	<ul style="list-style-type: none"> <li>• Utilize, complete and/or read defect escalation forms, Gantt charts, technical specification tables, schedules, integrity relationship diagrams, process flow charts, phone lists, customer lists, etcetera</li> </ul>

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<p><b>Writing Skills</b></p>	<ul style="list-style-type: none"> <li>• Prepare status/progress reports to customers</li> <li>• Record items discussed with clients using notes and log entries</li> <li>• Write memos and e-mail to clients, co-workers and vendors to provide them with work updates and to request information</li> <li>• Write concise statements in defect escalation reports to describe the severity and frequency of application problems</li> <li>• May write information systems implementation plans to document the requirements, approaches and potential problem areas</li> <li>• May write reports describing information systems audit reviews</li> <li>• May write lengthy proposals and prepare business cases</li> </ul>
<p><b>Numeracy</b></p>	<ul style="list-style-type: none"> <li>• Apply financial math/money math</li> <li>• Apply scheduling, budgeting and accounting math</li> <li>• Apply data analysis math</li> <li>• Utilize numerical estimation</li> </ul>
<p><b>Oral Communication</b></p>	<ul style="list-style-type: none"> <li>• Discuss task lists, schedules and work loads with co-workers</li> <li>• Discuss topics such as project activities, technical specifications, current business practices, regulatory and reporting requirements and security risks - use clear and succinct language to reduce the chance of misunderstandings</li> <li>• May be required to make presentations using language appropriate to the audience's technical backgrounds</li> <li>• May meet clients to discuss new assignments and projects</li> </ul>
<p><b>Thinking Skills</b></p>	<p><b>(Problem Solving, Decision Making, Job Task Planning and Organizing, Significant Use of Memory, Finding Information)</b></p>
<p><b>Problem Solving</b></p>	<ul style="list-style-type: none"> <li>• Encounter clients lacking the technical background needed to understand commonly-used acronyms and information technology jargon - determine the extent of clients' technical understanding and use more appropriate language</li> <li>• Identify solutions to resolve delays and establish new timelines</li> <li>• Address situations where the client may alter specifications after the project has commenced</li> <li>• Consult with clients to discuss the limitations of information systems applications and determine alternative options</li> </ul>
<p><b>Decision Making</b></p>	<ul style="list-style-type: none"> <li>• Decide how to migrate data from legacy systems to new applications</li> <li>• May participate in priority setting in relation to concurrent projects</li> <li>• May make task related decisions, such as which programming language to utilize</li> </ul>

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<b>Critical Thinking</b>	<ul style="list-style-type: none"> <li>• Evaluate the acceptability of software performance</li> <li>• Evaluate the ability of legacy information systems to meet increased data processing and information sharing demands</li> <li>• Evaluate the adequacy of existing information systems security measures</li> <li>• Assess the suitability of information systems platforms and software applications</li> </ul>
<b>Job Task Planning and Organizing</b>	<p>Information Systems Analysts organize their daily activities to meet project deadlines. They participate on cross-functional teams and may be involved on one or more projects simultaneously. Juggling projects is a necessary part of the work and they frequently have to decide which projects to work on next. They must be prepared to shift priorities if important project delivery deadlines are threatened.</p>
<b>Significant Use of Memory</b>	<ul style="list-style-type: none"> <li>• Remember computer language code</li> <li>• Remember registration dates, passwords and logon codes</li> <li>• Remember the functionality of software programs</li> <li>• Recall which applications and information systems platforms work best in on-line environments</li> </ul>
<b>Finding Information</b>	<ul style="list-style-type: none"> <li>• Locate technical specifications and timelines</li> <li>• Seek information about system and software malfunctions from co-workers, colleagues and suppliers</li> <li>• Consult technical manuals to locate specific information such as program codes and executable commands</li> </ul>
<b>Working with Others</b>	<p>Information Systems Analysts generally work independently but they may also work on teams with project leaders, software developers and subject matter experts. These teams are generally formed for specific projects and disband once the work is completed. Information Systems Analysts may work on a number of teams simultaneously.</p>
<b>Continuous Learning</b>	<p>Information Systems Analysts should engage in continuous learning as information technologies change rapidly. They are responsible for setting their own learning goals and personal technical skills improvement strategy. Employers encourage continuous learning, but generally do not make it mandatory. They keep abreast of changes by reading industry magazines, brochures, journals, attending conferences and workshops, and taking various courses related to information systems and technology. Courses can be in person, web-based training, or other forms of distance learning. Technical vendors, technical institutes, and universities offer enhanced training courses and programs. Information Systems Analysts also learn from co-</p>

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	workers and other members of project teams.
<b>Additional Information</b>	<b>(Physical Aspects, Attitudes)</b>
<b>Physical Aspects</b>	Information Systems Analysts sit for long periods of time at desks and computer workstations.
<b>Attitudes</b>	Information Systems Analysts must be client-focused, communicate well with others, and have the ability to work effectively either independently or in a team environment.
<b>Future Trends Affecting Essential Skills:</b>	Information Systems Analysts may require enhanced computer skills to keep pace with advancements in information technologies. Continuous learning activities will help ensure that these workers remain competitive in their field.

<b>Government of Canada Defined - Related NOC Code &amp; Description</b>	<b>2171 Information Systems Analysts and Consultants</b> Information Systems Analysts and consultants conduct research, develop and implement information systems development plans, policies and procedures, and provide advice on a wide range of information systems issues. They are employed in information technology consulting firms and in information technology units throughout the private and public sectors, or they may be self-employed.
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<b>Document Management:</b>				
Activity #	Activity Type*	Replaces	New Version Name	Responsible Individual
1	Document Created	Not Applicable	January 16, 2009	C. Sellar (CSA)
2	Document Modified	Jan 16, 2009	April 7, 2009	C. Sellar (CSA)
3	Document Modified	April 7, 2009	April 28, 2009	C. Sellar (CSA)
4	Document Modified	April 28, 2009	June 29, 2009	C. Sellar (CSA)
5	Document Finalized	June 29, 2009	July 29, 2009	C. Sellar (CSA)
6	...	...	...	...

**\*Activity Types:**

- ✓ Document Created
- ✓ Document Modified (Minor Corrections & Editorial Changes)
- ✓ Document Updated (Complete Review)
- ✓ Document Finalized
- ✓ Document Retired

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