

Job Description

(For Positions in CAW Local 555, Unit 1)

Job descriptions do not include every duty that an individual in a position performs. They are intended to be representative and characteristic of the duties required and the level of work performed. Depending upon the size of the department or unit and its functional activities, incumbents who fall into this category may perform all of the duties listed below or, in the case of large departments or units, may be assigned to designated specialized functions.

JD #:	JD00599	Pay Grade:	9
JD Title:	Geographic Information Systems Analyst	JD FTE Hours:	35
Job Family:	IT		

General Description

Responsible for designing and developing static and interactive maps featuring research results. Support and advise external project partners on procedures and methodologies using specialized knowledge of Geographic Information Systems (GIS). Run data analysis and apply statistical and spatial process skills to execute research ideas.

Representative Duties & Responsibilities

- Write complex syntax in SPSS for data analysis.
- Provide advice on and conduct analyses of complex data sets.
- Design and develop database templates.
- Develop and install geographic information system and cartographic mapping elements.
- Define, develop, and perform testing procedures.
- Work with and understand complex databases for the most effective and efficient organization of data based on processing requirements.
- Respond to inquiries from end-users and others regarding system requirements.
- Interpret, assess, and evaluate customer requirements in order to establish project scope and design criteria for mapping.
- Participate with a team in the development of research protocols.
- Integrate geographic information system elements with other technology for web based communications, showing the scope of the project and providing examples to interested parties.
- Participate in the development, maintenance, and implementation of policies and procedures that ensure the accuracy of information.
- Analyze, test, and resolve production problems.
- Write procedures for utilizing software and various applications.
- Transpose data from a variety of sources including neighbourhood shapefiles, research results, and Census data from Statistics Canada along with other source documents into geographic information systems and other databases.
- Develop presentations and present information at training sessions to project participants.
- Present information at meetings, seminars, and conferences.
- Explain and exchange technical concepts and information with clients in a non-technical manner to ensure customer comprehension of the issue.
- Ensure client satisfaction of delivered product through follow-up and post-implementation production support.
- Exchange technical information with customers and colleagues during the implementation and reporting process.
- Respond to customer inquires regarding systems processes and data flows.
- Provide input and participate in national and provincial research initiatives.
- Design and develop maps featuring provincial and national research results for public release.
- Write code to post static and interactive maps on the internet.
- Write data management and operations documentation for mapping projects.
- Search and gather information from a variety of sources and acquire or purchase appropriate geographic information system software, custom mapping applications, spatial data files, and custom Census data.
- Develop project plans for the implementation of the mapping portion of research projects.

Representative Duties & Responsibilities

- Contribute to the review, development, and modification of best practices and technical solutions.
- Contribute to project management documents for tracking project steps and process flow.
- Document the logical flow of processes and data in reports and flowcharts.
- Develop time and cost estimates for project assignments.
- Facilitate meetings with customers and interpret, assess, and evaluate customer requirements in order to establish project scope and design criteria for maps.
- Coordinate various tasks, resources, and people required to carry out problem solutions.
- Apply specialized knowledge and scientific principles to review, critically appraise and interpret published literature.
- Use statistical software to analyze data and interpret results.
- Author sections of scientific papers and abstracts.
- Ensure that relevant research methodology is applied and all research material is handled in accordance with established protocols, policies, and procedures.
- Apply specialized knowledge and scientific principles to review, critically appraise, and interpret published literature.
- Create and edit webpages in HTML for the project's public website.
- Remain current with frequent updates and changes to technology.

Supervision

- Provide direction to others in how to carry out work tasks.
- Ensure adherence to quality standards and procedures for short-term staff.
- Provide orientation and show procedures to others.

Qualifications

- Master's degree in Geography, Spatial Analysis, or related field of study.
- Requires 3 years of relevant experience.

Effort

Physical Effort:

- A typical work day consists of greater than 3.5 hours of low physical effort for activities such as:
 - Intermittent periods of keyboarding to develop technical solutions, troubleshoot, and correspond with colleagues and clients.
- A typical work day consists of up to 2 hours of moderate physical effort for activities such as:
 - Using a mouse for a prolonged period of time when designing maps.
- Elements of high physical effort are not a regular feature of this job.

Mental Effort:

- A typical work day occasionally requires routine mental effort for activities such as:
 - Processing routine documents, correspondence, and forms.
- A typical work day consists of up to 3.5 hours of moderate mental effort for activities such as:
 - Responding to inquiries from end-users and others regarding system requirements.
 - Interpreting, assessing, and evaluating customer requirements in order to establish project scope and design criteria for mapping.
 - Integrating geographic information system elements with other technology for web based communications, showing the scope of the project and providing examples to interested parties.
 - Participating in the development, maintenance, and implementation of policies and procedures that ensure the accuracy of information.
 - Explaining and exchanging technical concepts and information with clients in a non-technical manner to ensure customer comprehension of the issue.
- A typical work day consists of greater than 3.5 hours of high mental effort for activities such as:
 - Writing complex syntax in SPSS for data analysis.
 - Developing geographic information system and cartographic mapping elements.
 - Developing testing procedures.
 - Analyzing and resolving production problems.
 - Applying specialized knowledge and scientific principles to review, critically appraise and interpret published literature.
 - Using statistical software to analyze data and interpret results.

Working Conditions

Physical Environment:

- There are no adverse physical environment conditions inherent to the job.

Psychological Environment:

- Occasionally interacts with individuals who may be rude or upset.
- Frequently required to deal with multiple and simultaneous project deadlines.

Health & Safety:

- Risk to the incumbent is no higher than for the general population.

Job Description Rating Sheet

(For Positions in CAW Local 555, Unit 1)

JD #:	JD00599	Pay Grade:	9
JD Title:	Geographic Information Systems Analyst	Total Points:	598
Job Family:	IT		

Factor	Subfactor	Level Rating	Points
Skill	1. Applied Reasoning and Analytical Skills	5.0	105
	2. Breadth of Knowledge	2.0	13
	3. Adaptation to Change/Updating of Learning	2.5	17
	4. Interpersonal Skill	3.0	39
	5. Education and Experience	F3	123
	6. Dexterity and Coordination	2.0	12
Effort	7. Physical Effort	1.0	3
	8. Mental Effort	5.0	100
Responsibility	9. Planning and Coordination	3.5	55
	10. Responsibility for Others	2.0	33
	11. Accountability for Decisions Actions Affecting People, Assets, and Information	3.5	80
Working Conditions	12. Physical Environment	1.0	3
	13. Psychological Environment	2.0	10
	14. Health and Safety	1.0	5