

Jurisdiction: City of Ithaca

Jurisdictional Class: Competitive

Adopted: 04/06/05 (as Geographic Information System Specialist)

Revised: 07/06/05, 11/07/07, 09/15/10, 05/02/18, 09/07/22

Title changed to Senior Geographic Information System Specialist 11/07/07

SENIOR GEOGRAPHIC INFORMATION SYSTEM SPECIALIST

DISTINGUISHING FEATURES OF THE CLASS: The work involves responsibility for supervising and participating in the design, modification, implementation and maintenance of a Geographic Information System (GIS). The Senior GIS Specialist assists the GIS Administrator with the management of the overall GIS Program of the City of Ithaca. The duties vary according to assignment; however, in general, the incumbent may oversee the conversion of digital and non-digital data to a GIS system, design, plan and manage projects or aspects of projects, and assist in managing the modification and operation of the system. The incumbent also performs other related professional or technical duties specific to the assignment such as installing GIS software, preparing requests for proposals for GIS services or new hardware/software implementations, developing and administering training materials and programs, and designing and managing geographical databases and data development projects. The incumbent is also responsible for creating, editing and updating GIS data sets and conducting advanced spatial analysis. This class differs from GIS Specialist in that the Senior GIS Specialist has a broader conceptual and technical knowledge base, performs work that involves the management of the GIS System in addition to its operation, and has greater independence of action. The Senior GIS Specialist differs from GIS Administrator in that a Senior GIS Specialist does not have the overall responsibility for the GIS Program. The work is performed under the general supervision of the Geographic Information System Administrator with leeway encouraged in exercising independent judgment in carrying out the details of the work. Project and task-specific supervision may be exercised over subordinate GIS staff, particularly in the absence of the GIS Administrator. Does related work as required.

TYPICAL WORK ACTIVITIES:

- Supervises and participates in the collection, compilation and evaluation of data and data quality for conversion to GIS formats and inclusion in analyses;
- Supervises and participates in the update of existing datasets and creation of new GIS data including the development of quality control procedures, training of others and evaluation of procedures;
- Performs tasks to ensure that GIS data is compliant with standard GIS data design practices including creating meta-data sets;
- Conducts advanced spatial analysis and expands the GIS group's specialized analysis services and related offerings of the GIS Program, including the creation of networks from linear data, network tracing, and routing analysis, as well as the creation and maintenance of models;
- Supervises and participates in the creation and maintenance of written user manuals for the geographic information system;
- Assists in the evaluation of equipment, software and other computer applications for acquisition, including researching alternatives under the supervision of the GIS Administrator; tests equipment and software programs during testing phase of acquisition;
- Assists in the design and configuration of the GIS or other applications in a team setting including user needs assessment, conceptualization, trouble-shooting, testing and evaluation;
- Oversees the work of GIS staff for specific projects or tasks as assigned by GIS Administrator;
- Installs, tests, configures, diagnoses and resolves problems with GIS-related computer hardware, software and peripheral equipment as required;
- Studies and creates implementation alternatives for modifications to the GIS and the GIS Program; creates detailed records and reports relative to that work.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES, PERSONAL CHARACTERISTICS:

Thorough knowledge of the concepts, practices and techniques related to developing, maintaining and operating a GIS; thorough knowledge of the practices and techniques developing and maintaining geographic databases; good knowledge of the principles and practices of drafting, mapping and graphic visual methods as applied to GIS; good knowledge of spatial analysis tools using GIS extensions such as Spatial Analyst, Network Analyst and 3D Analyst, as well as desktop and mobile GIS; working knowledge of the practices and techniques related to maintaining, testing and configuring computer hardware, software and peripheral equipment as related to GIS; working knowledge of municipal departments; ability to perform close, detail work involving considerable visual effort and concentration; ability to plan and manage projects and manage the work of others in the completion of projects; ability to utilize and customize common office software programs including word processing, spreadsheets and databases; ability to understand and interpret complex oral instructions and/or written directions; ability to communicate effectively both orally and in writing; ability to analyze and organize data and prepare records and reports; ability to establish and maintain effective working relationships with others; ability to effectively work with and serve a diverse local community; physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS: Either:

- (a) Possession of a Bachelor's degree in Geographic Information Systems, Geospatial Analysis, Spatial Information Technology or a closely related field with similar course curriculum, and one (1) year of full-time paid experience, or its part-time paid equivalent, administering or assisting in the administration of a Geographic Information System, performing advanced spatial analysis or other specialized GIS, statistical or image analysis, or training others in the use of GIS software, methods and/or practices; or
- (b) Possession of a Master's degree in geography, planning, engineering, environmental science, or a closely related field with similar course curriculum, and one (1) year of full-time paid experience, or its part-time paid equivalent, administering or assisting in the administration of a Geographic Information System, performing advanced spatial analysis or other specialized GIS, statistical or image analysis, or training others in the use of GIS software, methods and/or practices; or
- (c) Possession of a Bachelor's degree in geography, planning, engineering, environmental science, or a closely related field with similar course curriculum, and three (3) years of full-time paid experience, or its part-time paid equivalent, administering or assisting in the administration of a Geographic Information System, performing advanced spatial analysis or other specialized GIS, statistical or image analysis, or training others in the use of GIS software, methods and/or practices; or
- (d) Possession of an Associate's degree in Geographic Information Systems and three (3) years of full-time paid experience, or its part-time paid equivalent, administering or assisting in the administration of a Geographic Information System, performing advanced spatial analysis or other specialized GIS, statistical or image analysis, or training others in the use of GIS software, methods and/or practices; or

Minimum Qualifications - continued

- (e) Graduation from an accredited GIS or spatial technology program leading to a certificate and possession of a Certified Geographic Information Systems Professional (GISP) certification from the GIS Certification Institute (GISCI) and three (3) years of full-time paid experience, or its part-time paid equivalent, administering or assisting in the administration of a Geographic Information System, performing advanced spatial analysis or other specialized GIS, statistical or image analysis, or training others in the use of GIS software, methods and/or practices; or
- (f) An equivalent combination of training and experience as defined by the limits of (a) through (e) above.

Note: College degrees must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education and/or U.S. Secretary of Education. If an applicant's degree was awarded by an educational institution outside the United States and its territories, the applicant must provide independent verification of equivalency. A list of acceptable companies who provide this service can be found at <https://www.cs.ny.gov/jobseeker/degrees.cfm>. Applicants are responsible for payment of the required evaluation fee.

SPECIAL REQUIREMENT: Possession of a valid New York State Class D driver license or a valid driver license equivalent to a New York State Class D driver license at the time of appointment and maintenance of said license for the duration of employment.