



IT GEOGRAPHIC INFORMATION SYSTEMS

General Summary

Geographic Information Systems (GIS) Specialists work with related software and programs to create and maintain data and/or maps that can be combined with geographically referenced data. GIS software has the capacity to relate different types of data such as socioeconomic, demographic, administrative or political boundaries, land use, land cover, environmental, infrastructure, and transportation networks.

Geographic Information Systems Specialist I

Jobcode: ITGT20

Pay Band: ID

FLSA Status: Non-Exempt

Distinguishing Characteristics

Under direct supervision, using a variety of geographic information systems and graphic applications, performs routine spatial data analyses, create and maintain databases, and prepare maps and graphics.

Recommended Education and Experience for Full Performance

Bachelor's degree in Geographic Information Systems, Geography, Planning, Geology, Cartography, Urban Studies, Landscape Architecture, Civil Engineering or Computer Science and two (2) years of experience in geospatial data management. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Minimum Qualifications

Associate's Degree in Geography or related degree and two (2) years of experience in geospatial data management. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling four (4) years may substitute for the required education and experience.

Essential Duties and Responsibilities*

1. Create maps, charts, graphs, and other information products using GIS and related software.
2. Analyze and integrate spatial data for geographic statistics to incorporate into documents and reports.
3. Identify and display geographic relationships among varying types of data.
4. Perform spatial analyses, data conversions, and data integrations using GIS and related software.
5. Coordinate the acquisition of existing and new spatial data in a variety of formats including GPS, mobile and electronic data capture, crowdsourced data collection, diGISizers, and other means.
6. Develop and maintain geospatial databases (geodatabase) including integration with existing business relevant databases.
7. Support GIS related systems integrations, application development, and implementations.
8. Collaborate with users to identify geospatial data needs and project requirements.
9. Provide support to design, develop, and publish cartographic information products.
10. Stay abreast of GIS domain data, platform, software, and application trends.
11. Apply understanding of topologic data types, relationships, and database design strategies.
12. Catalog GIS related data to develop and publish industry standard metadata.
13. Read and interpret maps, engineering and architectural drawings.
14. Apply cartographic aptitude to complete basic mathematical and statistical calculations.
15. Perform projections, coordinate systems, map scales, and elevation models.
16. Support GIS training activities and provide technical support to GIS data and application users.
17. Provide support for loading, configuring, and testing geospatial software and applications.
18. Use plotters, scanners, and printers where applicable.
19. Coordinate and execute simple design projects.

Geographic Information Systems Specialist II

Jobcode: ITGT23

Pay Band: IE

FLSA Status: Exempt

Distinguishing Characteristics

Under general supervision, perform advanced spatial data analyses and develop Geographic Information Systems products including web-based and mobile-mapping applications using relevant programming languages.

Recommended Education and Experience for Full Performance

Bachelor's degree in Geographic Information Systems, Geography, Planning, Geology, Cartography, Urban Studies, Landscape Architecture, Civil Engineering or Computer Science and four (4) years of experience in geospatial data management. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling eight (8) years may substitute for the required education and experience.

Minimum Qualifications

Bachelor's degree in Geographic Information Systems, Geography, Planning, Geology, Cartography, Urban Studies, Landscape Architecture, Civil Engineering or Computer Science and two (2) years of experience in geospatial data management. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Essential Duties and Responsibilities*

1. Lead the development of GIS oriented products, web and mobile applications to meet user requirements.
2. Develop programming scripts and other automated processes to expedite routine data analyses and mapping functions.
3. Conduct data analyses utilizing GIS tools to clarify and communicate spatial relationships and present results in a clear, appropriate manner.
4. Identify client requirements and then design, maintain or enhance online, self-service GIS applications for clients to access information and perform data analysis.
5. Understanding of web and mobile device interface design and visual communication in the context of interactive web and mobile device map oriented applications.
6. Collaborate with clients on data collection and analysis methods. Determine additional data and collection reporting requirements.
7. Review and ensure that data developed by and/or obtained by staff are accurate and documented using industry adopted metadata standards.
8. Prepare, provide and update spatial data sets. Search literature and online sources for relevant data.
9. Design GIS training programs and coordinate technical support to GIS data and application users.
10. Provide organizational support and guidance regarding GIS vendor relationships, contracts, and procurements.
11. Apply understanding and awareness of GIS data, platform, software, and application trends.
12. Apply knowledge in the application development cycle from gathering user requirements to user acceptance.
13. Apply knowledge in scripting languages and relational databases applicable to GIS, spatial database, web and mobile mapping application development.
14. Apply knowledge in geospatial database (geodatabase) design in compliance with existing state and/or federal standards.
15. Load, configure, and test geospatial software and applications.

16. Apply knowledge in configuring GIS license managers and overseeing user permissions.
17. Read and interpret maps, engineering and architectural drawings.
18. Apply cartographic aptitude with ability to complete basic mathematical and statistical calculations.
19. Apply knowledge of topologic data types, relationships, and database design strategies.
20. Apply knowledge in using cartographic projections, coordinate systems, map scales, and elevation models.
21. Program and use plotters, scanners and printers where applicable.
22. Act as technical lead and direct the work of others or lead project efforts, including liaison with stakeholder groups.
23. Work independently and as part of a team.
24. Multi-task and manage deadlines.
25. Apply experience with industry standard computer programming languages.

Bargaining Unit: **Geographic Information Systems Specialist I, II may be covered by a collective bargaining agreement.**

Statutory Requirements:

Conditions of Employment:

Working Conditions: Working Conditions for individual positions in this classification will vary based on each *agency's utilization, essential functions* and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Established: 6/23/2016

Revised: 7/26/2016 FLSA change GIS Spec I

**Essential Duties and Responsibilities are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of duties. Classification description subject to change. Please refer to SPO website (www.spo.state.nm.us) to ensure this represents the most current copy of the position.*