



GIS PROGRAMMER/ENGINEER 1

Department: Finance
Job Class #: 631900
Pay Range: Professional 15

FLSA: Non-Exempt
Represented: No

Classification descriptions are intended to present a descriptive list of the range of duties performed by employees in this class and are not intended to reflect all duties performed within the job.

GENERAL FUNCTION:

This is entry-level professional, technical, analytical, and customer oriented work in the GIS Division of the Information Technology Division of Finance. An employee in this classification provides technical services, GIS solutions, complex analysis and project management to IT GIS clients and their use of enterprise GIS technologies. The GIS Programmer/Engineer 1 may include any or all of the essential functions listed below.

SERIES CONCEPT:

The GIS Programmer/Engineer 1 is the entry-level professional in the series. This classification is distinguished from other GIS Programmer/Engineer levels by the scope of work, level of supervision, and direction required to perform job functions.

ESSENTIAL FUNCTIONS:

- Perform entry-level professional, technical services in GIS data construction, programming, database management, GIS analysis, system implementation and project management. Assist senior GIS staff on enterprise, large scale or complex projects.
- Effectively prioritize and schedule a variety of work assignments, possess good verbal and written communication skills when working with technical and non-technical staff and establish and maintain positive working relationships with coworkers, other county departments, outside agencies and the Public.

Business Analysis

- Help clients translate real-world needs into practical, economical, state-of-the-art, GIS technology-driven solutions.
- Assist in the identification of business and functional requirements. Create project requirement documents and specifications to be incorporated into formal contracts.
- Complete workflow analysis of business processes to streamline and enable efficient use of GIS software and processing.
- Provide technical skills by performing spatial analysis and geospatial processing such as: query software tools, statistical analysis, data density analysis, grid analysis, terrain modeling, and network analysis to solve a technical problem or implement a business process.
- Create high quality cartographic maps, displays, mapbooks and presentations that incorporate charts and insets to clearly show data results.

Data Construction and Management

- Independently complete data construction, conversion, and quality control for GIS data sets across multiple hardware platforms and operating systems.
- Provide coordination between departments and agencies regarding the use, delivery, and publication of geographic data resources. Protect the safety, integrity, and privacy of data.
- Create and document data set maintenance procedures, metadata and spatial processing models.
- Analyze database performance, troubleshoot, test designs, and recommend operational improvement.

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- Coordinate security measures with developers to safeguard information in systems against accidental or unauthorized damage, modification or disclosure.

Software Development

- Take direction and confer with programmers to design the system/software and obtain information on project limitations and capabilities, performance requirements and interfaces.
- Assist in the design, development and modification of software systems, using scientific analysis and mathematical models and object or component oriented software development.
- Develop software system testing and validation procedures, programming and documentation.
- Modify existing software to correct errors, migrate it to new hardware or to improve performance.
- Support new system software and integrate existing business systems with GIS.
- Perform spatial analysis of data themes.
- Create data models and processes for common routines or complex spatial analysis.

System Support

- Support mission critical GIS systems in the Emergency Operations Center during emergencies and activations.
- Effectively use GIS enterprise systems and independently solve GIS technical projects and troubleshoot software malfunctions.
- Deliver excellent customer service, create customer satisfaction, and enhance customers' relationships with the Information Technology Division.
- Research GIS technology and best practices to optimize business practices, and provide new technical solutions.

Implementation Services

- Manage client relationships and expectations.
- Communicate status, progress, process, problems, timelines, and results with GIS management and team members through monthly reports, team meetings, and SOPs (Scope of Procedure).
- Create and manage a project's scope, cost, schedule, work plans, and contractual deliverables through the application of planning, tracking, quality assurances, change control and risk management.
- Market services, projects, and resources effectively.

Training

- Train, instruct, and support county staff on the productive use of GIS software systems and databases.
- Support, assist and train internal and external GIS clients on the productive use of County systems and data.

Communication

- Act as liaison between departments and IT to communicate any potential issues/questions and provide IT solutions.
- Work in a teamwork based environment, communicating effectively with all levels of staff and management.
- Solve GIS information technology problems proactively.

OTHER JOB FUNCTIONS

- Manage own schedule and workload.
- Manage time and resources.
- Prepare reports and delivers presentations.
- Perform administrative tasks and other job functions as required.

SUPERVISION RECEIVED AND EXERCISED:

The IT GIS Programmer/Engineer 1 does not supervise or lead. An employee in this class works under the general supervision of an IT GIS Programmer/Engineer, Lead or Expert/Supervisor who observes work through assignments and projects to evaluate results achieved.

WORK ENVIRONMENT:

The work environment characteristics described herein are representative of those an employee encounters while performing the essential job functions. Work is performed in an office and field environment. Work may involve frequent sitting, standing, walking, bending, and lifting and carrying field gear, working in all weather conditions, and driving to and from job sites. Field data collection (GPS), lifting of catch basin lids and traveling to various departments may be included. Ability to work after normal County business hours, including weekends, for customer support, a scheduled function, or in an on-call capacity required.

PHYSICAL REQUIREMENTS:

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions. Physical activities required are hand and finger dexterity necessary to operate equipment used in the position, talking, seeing and hearing. Walking, sitting, bending/stooping, pushing/pulling, and unassisted lifting associated with the job duties is required.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

- GIS technologies, techniques and practices.
- Mapping systems, coordinates and spatial data accuracies.
- Current information technologies and trends.
- Training techniques.
- And understanding of current GIS information technologies and the County GIS system.

Skill in:

- Use of independent judgment and effective decision-making in the application of a wide variety of laws, policies and procedures and in effective problem-solving.
- GIS, math, models, programming, analysis and mapping.
- Project management.

Ability to:

- Define, track, and assure responsiveness to clients' information service problems.
- Communicate effectively verbally and in writing to audiences of various social, cultural, ethnic, educational and economic backgrounds.
- Contribute to analyzing and compiling results of decision issues in IT.
- Research, verify, edit, and update data bases and GIS spatial data.
- Define, track, and assure responsiveness to clients' GIS service problems.
- Understand and follow written and verbal instructions.

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- Work effectively and productively with others.
- Effectively coordinate, perform and complete multiple duties and assignments concurrently and in a timely manner.
- Maintain regular, predictable and punctual attendance during regularly scheduled work hours at assigned worksite.
- Work a flexible schedule, which may include evenings, weekends, holidays and overtime. May be subject to responding to emergency situations on twenty-four hour basis.
- Meet the travel requirements of the position, if any.
- Physically perform the essential job functions of the classification.

MINIMUM REQUIREMENTS TO APPLY:

Bachelors Degree in Science, Technology, Engineering, Geography or related field and two years of information technology/GIS experience required. Additional education or experience which clearly indicates the ability to perform the essential functions of the position may substitute equally on a year of year basis for the recruiting requirements.

Special Note: Prior to receiving a Bachelor's Degree in a relevant field of study, students in their last term of education may be considered. The recruiting requirements of the position would have to be met prior to employment beginning.

SPECIAL REQUIREMENTS AND/OR QUALIFICATIONS: A valid Washington State driver's license may be required when travel is required of the position. Ability to successfully complete a Pierce County background investigation. Fingerprint and in-depth criminal history check may be required for certain law enforcement system support assignments.