GUILFORD COUNTY SCHOOLS JOB DESCRIPTION

**JOB TITLE: PROGRAMMER/ANALYST I -
STUDENT INFORMATION**

GENERAL STATEMENT OF JOB

Under general supervision, performs specialized technical work in the development of data dashboards, web-based reports and operational routines to provide secure access to LEA end users for the Student Information Department. Employee is responsible for reviewing, overseeing and participating in data dashboard projects which include designing detailed and interactive dashboards and reporting tools according to user requests or defined needs; diagnosing and resolving operational problems within the dashboards, writing necessary data queries, incorporating web-based access and developing formats for various reports or documents. Work involves assisting personnel in the use and understanding of all developed dashboards and interactive reporting tools. Employee must ensure standard quality levels are met and data integrity is maintained. Employee reports to the Director of Student Data Information.

SPECIFIC DUTIES AND RESPONSIBILITIES

ESSENTIAL JOB FUNCTIONS

Works with the Director to review data based project requests for schools and central office departments, determines scope of project and appropriateness, responds to request and schedules implementation if approved.

Converts intricate data sets into informative and user-friendly reports for schools. Generates graphic visualizations of data to be shared with school and district leadership.

Designs and develops enterprise-wide web-based dashboards utilizing the data from the LEA data warehouse and data provided by other departments.

Writes, tests, de-bugs, and maintains data dashboards using various business intelligence software.

Works with groups of users to define needs, translates user requirements into effective data dashboards, establishes system parameters and develops formats for various reports and documents.

Uses query or business intelligence tools to create ad hoc queries and complex reports.

Writes interface procedures and automated processes between various database structures or computer platform

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Collects/Provides data from/to other departments within the LEA for the purpose of creating and developing data dashboards.

May troubleshoot hardware and software problems, determines cause of error or stoppage and applies corrective steps in cases where problems can be corrected or reports problem to appropriate staff for assistance.

Evaluates performance of existing data dashboards and modifies as needed for optimal performance.

Performs daily system administration tasks.

Monitors newly developed data dashboard projects to ensure proper functionality.

Develops and manages the access to the business intelligence server and backup/recovery procedures for the data dashboards.

Maintains documentation regarding operating procedures and workflow for data dashboards.

May lead or train other staff.

Prepares instructions to guide users and prepares instructions to guide Student Information in the using the data dashboards.

Assists users with the data dashboard functionality.

Assist users with printing special reports and forms.

ADDITIONAL JOB FUNCTIONS

Performs other related work as required.

MINIMUM TRAINING AND EXPERIENCE

Bachelor's degree in computer science or a related field, and 1 to 3 years of experience in computer programming; or any equivalent combination of training and experience which provides the required skills, knowledge, and abilities.

MINIMUM QUALIFICATIONS OR STANDARDS REQUIRED
TO PERFORM ESSENTIAL JOB FUNCTIONS

Physical Requirements: Must be physically able to operate a variety of equipment and tools including computers, scanners, adding machines, computer software, etc. Must be able to exert up to 30 pounds of force occasionally, and/or up to 5 pounds of force frequently, and/or a negligible amount of force constantly to move objects. Physical demand requirements are in excess of those

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for Sedentary Work. Light Work usually requires walking or standing to a significant degree. However, if the use of arm and/or leg controls requires exertion of forces greater than that for Sedentary Work and the worker sits most of the time, the job is rated for Light Work.

Data Conception: Requires the ability to compare and/or judge the readily observable, functional, structural or composite characteristics (whether similar or divergent from obvious standards) of data, people or things.

Interpersonal Communication: Requires the ability to speak and/or signal people to convey or exchange information. Includes receiving instructions, assignments or directions from superiors.

Language Ability: Requires the ability to read a variety of correspondences, technical manuals, trade journals, newsletters, etc. Requires the ability to prepare reports, forms, system documentation, presentations, etc. using prescribed formats and conforming to all rules of punctuation, grammar, diction, and style. Requires the ability to speak to people with poise, voice control and confidence.

Intelligence: Requires the ability to apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions; to interpret an extensive variety of technical instructions in mathematical or diagrammatic form; and to deal with several abstract and concrete variables.

Verbal Aptitude: Requires the ability to record and deliver information, to explain procedures, to give oral and written instructions. Must be able to communicate effectively and efficiently in a variety of technical or professional languages including computer terminology.

Numerical Aptitude: Requires the ability to utilize mathematical formulas; to add and subtract; multiply and divide; utilize decimals and percentages; and to apply the theories of algebra, geometry, and statistics.

Form/Spatial Aptitude: Requires the ability to inspect items for proper length, width and shape.

Motor Coordination: Requires the ability to coordinate hands and eyes rapidly and accurately in using computer equipment.

Manual Dexterity: Requires the ability to handle a variety of items such as computer equipment. Must have minimal levels of eye/hand/foot coordination.

Color Discrimination: Requires the ability to differentiate between colors and shades of color.

Interpersonal Temperament: Requires the ability to deal with people beyond giving and receiving instructions. Must be adaptable to performing under stress and when confronted with persons acting under stress.

Physical Communication: Requires the ability to talk and hear: (Talking: expressing or exchanging ideas by means of spoken words. Hearing: perceiving nature of sounds by ear.)

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Must be able to communicate via telephone.

SKILLS, KNOWLEDGE AND ABILITIES

Considerable knowledge of business intelligence software and operating systems.

Considerable knowledge of the student information management system used by the school system, operating procedures, related components, capabilities, limitations, and system requirements.

Considerable knowledge of various methods and approaches to debugging system and software errors.

Considerable knowledge of web-based programming tools.

Considerable knowledge of query tools.

General knowledge of network communications programming for incorporating data from various databases and computer platforms.

Considerable knowledge of automated processes within the school system.

Considerable knowledge of department standards and procedures regarding data and security.

Considerable knowledge of the current literature, trends and developments m the field of business intelligence software.

Ability to evaluate the performance of software and make recommendations for improvement.

Ability to translate user requirements into effective data dashboard.

Ability to evaluate requests for changes and/or updates to the system.

Ability to schedule and monitor development projects.

Ability to determine and document user requirements.

Ability to develop clear, effective instructions for student information staff and for users.

Ability to design, develop data dashboards and query data from various data sources.

Ability to maintain complete and accurate records.

Ability to communicate effectively both orally and in writing.

Ability to establish and maintain effective working relationships as necessitated by work

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assignments.

<u>DISCLAIMER</u>

The preceding job description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties, responsibilities, and qualifications required of employees to this job.

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