

SAN BERNARDINO MUNICIPAL WATER DEPARTMENT CLASSIFICATION SPECIFICATION

TITLE: SENIOR PROGRAMMING ANALYST

DATE: 7/1/2022

JOB CODE: 51849

FLSA STATUS: EXEMPT

UNIT REPRESENTATION: MID-MGMT

Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the job.

DUTIES SUMMARY

Under general direction to perform complex professional, technical, and analytical duties in the areas of design, development, modification, programming, analysis and testing, implementation, documentation, and maintenance of a variety of Department systems, programs, applications, and databases. Troubleshoot, analyze and resolve systems and applications hardware and software problems; provide user support and training; perform additional system module implementation including vendor upgrades; provide highly responsible assistance to higher level staff; and to perform related duties as assigned. Incumbents may be assigned to perform Client Services functions, Application Management/Development functions, or a combination of both.

DISTINGUISHING CHARACTERISTICS

The Senior Programming Analyst is a journey level classification. Positions in this class perform specialized and professional work assignments of a complex and difficult nature in the development, modification, installation and/or maintenance of Department systems and applications, including highly sensitive financial, payroll, human resources, health and safety, and utility billing systems. Incumbents perform project management responsibilities in the development of new systems or large-scale system modification and conversion projects requiring an understanding of advanced technologies and cross-platform/operating system integration and connectivity issues in a complex systems environment. Impact of decisions may be significant, and contacts are diverse including management and external sources. Supervision is received from the Information Technology Manager.

EXAMPLES OF DUTIES

The following duties are typical essential duties for positions in this classification. Any single position may not perform all of these duties and/or may perform similar related duties not listed here:

- Provide courteous and expeditious customer service to the general public and City and Department staff;
- Routinely adhere to and maintain a positive attitude toward City and Department goals;
- Perform complex and responsible assignments in the design, development, programming, modification, testing, implementation, documentation, and maintenance of Department systems and applications,

including business and financial systems, health and safety, utility billing applications, records management, payroll, and human resources;

- Maintain and provide support for existing application and system software; provide technical answers to client requests for information on system use; respond to trouble calls and requests for major or minor software modifications; assess, review, and research system operation problems and functionality; recommend technical solutions on alternative system or applications; determine method of integrating new programming code into existing programs to meet user needs; write, test, debug, and install new and modified programs;
- Design scenarios for unit, systems, and interface testing; plan and execute system conversion and installation processes for complex applications, which may involve critical business processing deadlines; design and implement disaster recovery plans;
- Monitor new system enhancements for accuracy and user effectiveness;
- Prepare activity and progress reports for management regarding project activities;
- Evaluate and test vendor software packages for conformance with organizational user requirements and priorities;
- Respond to inquiries and requests and provide technical assistance on PC systems and programs to Water Department users;
- Prepare and design routine system generated and ad hoc reports, presentations, and other special documents utilizing applicable programming languages and development tools;
- Perform complex system testing, user documentation, and implementation of added systems features;
- Perform routine system analysis for various organizational projects; test and recommend system solutions;
- Communicate with, and provide highly responsible support to, system users;
- Perform procedural audits on business systems and procedures. Identify areas to be considered for improved efficiency;
- Develop software documentation and user training materials; train and work with users in implementing new applications or systems enhancements;
- Troubleshoot system problems and develop reports to identify the source of problems and perform or request fixes or repairs;
- Maintain knowledge of current computer systems and software;
- Develop and maintain personal computer database programs, implement and maintain database files;
- Develop and maintain documentation of data systems;
- Interact with other departments, vendors and other agencies in person, remotely and by telephone;
- Troubleshoot and perform minor repairs and adjustments to computer systems and peripheral equipment;
- Submit modifications or enhancements to Department website; participate in development of Department policies on website design and use; maintain website security; ensure Department users are trained on methods of access and use of websites;

- Monitor and prepare reports on the team's progress;
- Conduct training and provide assistance to other technical and Department staff;
- Perform related duties as required.

QUALIFICATIONS

Any combination of education, training, and experience that would likely provide the knowledge, skills, and abilities to successfully perform in the position is qualifying. A typical combination includes:

Knowledge of:

- Working understanding of computer programming principles, techniques and procedures for business and technical systems;
- Principles and methods of advanced systems analysis, including business and entity relationship analysis tools and methods;
- Working understanding of principles, methods and techniques in the design, development, and operation of information systems for standard and complex computer platforms and peripherals, functions, capabilities, characteristics and limitations of standard computer, PC and related equipment;
- Relational database theory, design rules and development practices;
- Database management systems software as they affect applications design;
- Software development and maintenance tools and utilities applicable to position responsibilities;
- Programming theory and a variety of programming languages used in Department applications, with a focus on SQL Server, SQL Server Management Studio, T-SQL, C#, and Visual Studio;
- Standard PC software packages, including word processing, spreadsheets and database;
- Principles, methods, and techniques in web site design and development including usability concepts, such as navigational aids, knowledge management, and information rendering; standard web programming and graphics mark-up languages;
- Systems integration design concepts as they relate to applications design and development;
- Principles and practices of sound business communication; correct English usage, including spelling, grammar, and punctuation;
- Project planning, prioritizing and scheduling techniques;
- Basic public relations and customer service.

Ability to:

- Understand and apply user system specifications in performing system evaluation, design and programming;
- Perform business rule and process analyses and apply critical thinking skills to reach sound, logical conclusions regarding user client needs and business requirements and develop effective technology solutions;

- Design and develop effective applications and other technology solutions, including web sites and web-enabled applications to meet user requirements, using appropriate programming languages;
- Troubleshoot and diagnose complex systems problems and install fixes or make repairs in areas of responsibility;
- Communicate clearly and effectively, orally and in writing;
- Set priorities and organize work to complete project responsibilities efficiently and effectively;
- Read, interpret, explain, and apply technical information on business processes, software, and hardware to technical and non-technical users;
- Prepare clear and concise program documentation, user procedures and systems documentation, reports of work performed, and other written materials;
- Statistically analyze data;
- Make sound independent decisions within established guidelines;
- Understand and follow written and oral work instructions;
- Work collaboratively and effectively with project team members and end users;
- Perform highly detailed work on multiple concurrent tasks;
- Work under changing deadlines with frequent interruptions;
- Use tact and diplomacy when dealing with sensitive, complex, and/or confidential issues and situations;
- Maintain confidentiality of highly sensitive information;
- Establish and maintain effective working relationships with end users, vendors and others encountered in the course of work;
- Maintain a driving record which meets Vehicle Code Standards and is acceptable to the Department and its insurance carrier.
- Respond to non-normal working hour emergency operational conditions.

MINIMUM QUALIFICATIONS

Education/Experience:

Bachelor's degree in Information Systems, Computer Science, or a closely related field;

And

2 years of progressively responsible experience in the analysis, design, development, installation, and maintenance of computer applications in conformance with business and technical requirements. Experience must include analyzing, developing, documenting, and implementing a variety of systems analysis projects.

OR

Associate's degree in Information Systems, Computer Science, or a closely related field;

And

5 years of progressively responsible experience in the analysis, design, development, installation, and maintenance of computer applications in conformance with business and technical requirements. Experience must include analyzing, developing, documenting, and implementing a variety of systems analysis projects.

OR

Graduation from high school, or equivalent;

And

8 years of progressively responsible experience in the analysis, design, development, installation, and maintenance of computer applications in conformance with business and technical requirements. Experience must include analyzing, developing, documenting, and implementing a variety of systems analysis projects.

Desirable:

Proficiency in the design, configuration, and setup of a Microsoft SQL server; experience configuring, maintaining, and backing up MSSQL; experience in two or more scripting/programming languages: Transact-SQL (preferred), MS PowerShell, MS Visual Studio C# (preferred), MS Windows Script Host, JavaScript, Shell Script, Perl, ASP, Crystal, C, or C++; and understanding of project management principles.

NECESSARY SPECIAL REQUIREMENTS

An employee within this classification shall be required to respond to non-normal working hour emergency operational conditions.

Possession of a valid Class "C" California driver's license is required. For out of state applicants, a valid driver's license is required and a valid Class "C" California driver's license must be obtained within ten (10) days of appointment (CA Vehicle Code 12505c).

PHYSICAL TASKS AND ENVIRONMENTAL CONDITIONS

There is frequent need to stand, sit, stoop, walk and use hands repetitively to finger, handle, feel, or operate standard office equipment; reach with hands or arms and perform other similar actions during the course of the workday. Employee accommodations for physical or mental disabilities will be considered on a case-by-case basis.

Incumbents require sufficient mobility to work in an office and/or field setting and operate office equipment, transport materials and supplies weighing up to 25 pounds and to travel to various locations. Must be able to see in the normal visual range, with or without correction, with vision sufficient to read small print, computer screens and other printed documents. Must be able to hear in the normal audio range, with or without correction. Employee accommodations for physical or mental disabilities will be considered on a case-by-case basis.

CAREER LADDER

From: Senior Programming Analyst

To: Information Technology Manager

Job Description:

Board Approved:

6/28/2022

Testing Standards: App Review/Supp App Review