*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.*

**DEFINITION**

Design, develop, administer, and maintain assigned system, network, or application(s); perform systems analysis in understanding needs, conducting design work, and providing user support; conduct or oversee programming, design and development activities; conduct database administration; manage systems and applications security; train users; administer documentation activities; conduct project management of contractor work and projects in area of assignment.

**JOB CLASSIFICATION**

Exempt, Safety-Sensitive.

**SUPERVISION RECEIVED AND EXERCISED**

Receives direction from the Information Technology Supervisor.

**PRIMARY DUTIES**--*The following are examples of primary duties assigned to positions in this classification. Other related duties and responsibilities may be assigned.*

1. Plan, develop, coordinate, and modify systems, networks, or application(s) for implementation of City-wide computer hardware and software services; design, code, test, install, and ensure integrity of new applications; coordinate the input and maintenance of critical data.

2. Manage and implement new technological projects; develop system design, functional specifications, planning, scheduling, training, and testing of system; set priorities and objectives related to projects; write bid specifications; coordinate work schedules to ensure projects are completed efficiently; work with vendors and staff for implementing new systems.

3. Perform system and database administration tasks, including periodic maintenance, patch installations, and data collection and validation; design, verify, and analyze custom reports, forms, applications, queries, and data storage files.

4. Develop and write technical procedures and documentation for assigned applications; provide training associated with various servers, operations, and new systems.

5. Provide advanced technical assistance to computer system users within various departments of the City; respond to user inquiries; provide information within the area of assignment; resolve complaints in an efficient and timely manner.

6. Manage security administration for assigned systems; assign user accounts and passwords, troubleshoot applications, and determine authority levels of users in system.

7. Perform systems analysis for other departments or outside agencies; identify opportunities that can improve efficiency of overall system processes; coordinate and negotiate new services, changes to existing services, and integration of potential system applications.

8. Participate in the development and implementation of goals, objectives, policies, procedures, and priorities for assigned programs; recommend improvements and modifications.

9. Prepare and maintain a variety of records, reports, and logs.

10. Perform other duties of a similar nature or level.

When Assigned Position of Radio Frequency/Microwave Analyst

1. Develops and documents moderately complex electronic and electrical system requirements. Solves problems concerning fielded hardware and software over the entire product lifecycle. Research advances in RF/microwave telecommunications technology for potential application.
2. Lead design, verification and test projects for RF and microwave electronics for wireless communication systems, including transmitters, receivers, antennas, power supplies, and transmission lines. Identify causes of RF interference and performs in-depth troubleshooting.
3. Optimize the end-to-end RF design, propagation modeling and prediction, supporting State of Colorado Emergency Services IP Network. Work with state RF management to establish design criteria, link budget and traffic analysis as needed for network design and update existing performance parameters for ongoing improvements as required.
4. Designs hardware, software, and interface specifications to include source power configurations. Conduct frequency coordination tasks to meet Federal Communications Commission licensing requirements.

1. Performs equipment installation and repair or coordinates vendor support. Monitors vendor performance to ensure system integration, maintenance, and upgrades meet operational requirements.
2. Design and execute test methodology for characterizing system performance with internal resources and external test partners.

**QUALIFICATIONS**

**Knowledge of:**

Operating system development, maintenance, and administration.

Principles and procedures of system, user, and security administration.

Network operating systems including installation, system administration, configuration, installation, and maintenance.

Operational characteristics of a variety of systems hardware and software applications.

Programming concepts and languages of an advanced and highly technical nature.

Computer hardware and architecture of an advanced and highly technical nature.

Internet operating principles and characteristics.

Principles and practices of system documentation.

Principles and practices of project management.

Installation and maintenance principles and practices of various data communications equipment and protocols.

Customer service principles and problem resolution techniques.

Principles and practices of record keeping.

English usage, spelling, grammar, and punctuation.

Modern office technology and equipment, including computers and related software applications.

Applicable tools and equipment operations.

Applicable Federal, State, and local codes, laws and regulations.

Modern computer room operations including fire suppression, HVAC, and power management.

Electrical codes and concepts for single phase and 3 phase power.

Construction concepts and codes.

Design, installation, and management of voice communication systems including phone and radio.

When assigned to Radio Frequency/Microwave Analyst

Function and operation of pagers, portable communications equipment, mobile radios, base-stations and repeaters, trunked radios systems and microwave radio systems.

Communications circuits and connectivity.

Configuring, calibration, utilization and data processing of various RF design and optimization equipment and software.

Equipment co-location planning and process of inter-modulation and other external interference analysis.

**Ability to:**

Perform professional duties in the design, implementation, and administration of information systems,

telecommunications and local/wide area networks.

Analyze, design, program, install, configure, upgrade, and maintain a variety of computer systems and programs.

Respond to requests and inquiries from the public and City employees.

Establish and maintain accurate records, logs, and files.

Perform system, network, and database administration duties.

Install network cabling and other components associated with data and telecommunications.

Evaluate user requirements and recommend information system solutions.

Read, interpret and apply knowledge gained from complex technical publications, manuals, and other documents.

Develop and maintain technical system documentation.

Analyze data and develop logical solutions to complex computer and applications programming problems.

Troubleshoot and resolve hardware and software problems.

Comply with Payment Card Industry (PCI) standards for handling and securing payment card information.

Interpret and apply Federal, State, and local policies, laws and regulations.

Operate and use modern office equipment including computer and various software applications.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

**Experience and Training Guidelines**

*Minimum Requirements:*

 **Experience:**

 Four (4) years of information technology experience in a variety of IT functions as related to the described duties.

 **Training:**

 Bachelor’s degree from an accredited college or university with major course work in information technology, computer science or a related field.

Other combinations of experience and education that meet the minimum requirements may be substituted.

**License or Certificate**

Possession of, or ability to obtain, a valid Colorado driver’s license.

**WORKING CONDITIONS**

**Environmental Conditions**:

The job is performed in the following working environment:

Office environment.

The following condition(s) may be present on a continuing basis:

Hazardous physical conditions (mechanical parts, electrical currents, vibration, etc.).

High noise levels, extremes of heat and cold.

Local and non-local travel.

**Physical Conditions**:

The job is characterized by:

|  |  |
| --- | --- |
| **Medium Work**: Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects. |  |

The following physical activities are very or extremely important in accomplishing the job’s purpose and are performed daily:

While performing the duties of this job, the employee is regularly required to sit, stand, walk, talk, hear, see, and demonstrate manual dexterity. The employee is also required to perform light lifting.