### INFORMATION SYSTEMS PROGRAMMER

### **DEFINITION**

Under general supervision to perform systems analysis, design, and modification and /or computer programming of a routine to complex nature in support of administrative and business services; coordinate systems projects; enhance and maintain computer systems running on a variety of hardware and software platforms throughout the City; and to perform related work as required.

#### **EXAMPLE OF DUTIES**

Conducts needs assessments to determine information and automation mandates of assigned areas; surveys and analyzes major existing or proposed systems and prepares recommendations, project proposals, and system requirements; coordinates assigned systems development projects; writes project plans with activities, timelines, and resource requirements; reports on progress, and variances to plans; prepares system design specifications and documentation required for programming efforts that are accomplished in a variety of computer languages and software applications; designs and develops program logic and processing steps; may code programs in various computer languages as needed; plans and develops testing of program applications; writes variety of utility programs to support adopted systems as well as develops systems and network applications; performs systems analysis functions related to design and implementation phases of projects, including analyzing work and data flow, developing system logic, identify input and output requirements and layouts, develop file layouts, create files and screens; coordinates development work with systems integrators, software consultants, programmers, and others; completes or assists with programming, testing, and debugging efforts; prepares and maintains technical documentation; provides support and troubleshooting functions; responds to requests for service from users; interfaces with city staff on various projects; coordinates and conducts training for users on various computer systems and applications; develops manuals, procedures, and instructions; may coordinate and participate in information systems advisory groups and committees as well as attend meeting held by various users' and system focus groups.

### INFORMATION SYSTEMS PROGRAMMER

### SPECIAL REQUIREMENTS (cont.)

Possession of an appropriate California driver's license.

#### EMPLOYMENT STANDARDS

### Knowledge of:

- Modern principles, practices, and techniques of LAN and WAN management, administration, analysis, design and maintenance.
- Systems analysis and computer programming principles and methodology used to define and develop various systems and applications
- Principles and concepts of operating systems (client/server), computer hardware, computer networks, programming languages (MS SQL, Access, C C++, Java, Visual Basic, Unix), communications, database software, web applications (HTTP/ASP), and design, report generation/query language and other utilities, spreadsheets (MS Excel) and other business applications.
- Hardware architecture, Windows, NT and 2000 operating systems and network.
- Administrative principles and techniques such as project planning and work prioritization.
- Basic accounting, statistics, and business administration systems and procedures along with a working knowledge of MS SQL Cluster, Replication and OS administration tools.
- Basic knowledge of HTML and XML.
- Research methods and procedures.

## Ability to:

- Design programming logic and coding into program instructions; develop program design tests.
- Conduct needs assessments and feasibility studies, analyzing users' needs and problems, defining system requirements, evaluating solutions and feasibility of options, establishing priorities, and coordinating resources.
- Create computer files and screens, designing input documents and output reports.

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# **EMPLOYMENT STANDARDS (cont.)**

- Analyze, organize, streamline, and document operational procedures necessary for successful implementation of new systems and software.
- Prepare a variety of reports and presentations.
- Instruct users with varied levels of expertise, including nontechnical users, in the operation of new or modified computer systems and applications.
- Effectively represent the MIS functions with concerned individuals, community organizations and other governmental agencies.
- Establish and maintain cooperative working relationships.
- Communicate effectively orally and in writing.

#### and

Training and Experience: Any combination of training and experience which would provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education: Graduation from an accredited "four" year college or university with major course work in computer science, data processing, management information systems, or closely related fields.

Work Background: Four years of progressively responsible and varied professional experience in data processing field, including work in software adaptation, systems utilization, and a minimum of fourth generation languages. A MCSE or MSDBA Certification is highly desirable in conjunction with academic accomplishments.

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