DEFINITION
Under the direction of the Manager of Technical Services, installs, maintains and analyzes mainframe computer operating subsystems and third party software; monitors performance and tuning of system parameters; finds solutions to hardware and software problems; designs and writes new programs; maintains security system; designs and tests connections between different computer systems; works with vendors on patches and upgrades; provides technical advice and training; and recommends new software and hardware.

DISTINGUISHING CHARACTERISTICS:
Systems Programmer is a journey-level classification supporting mainframe class hardware and software. The incumbent is assigned significant responsibilities requiring specialized knowledge, skills, abilities, and experience. The incumbent exercises independent judgment in the performance of his or her duties. Works with systems administrators and Database Administrators as necessary to complete his or her duties.

EXAMPLES OF DUTIES
1. Installs, maintains and analyzes system software and hardware; proposes modifications, and evaluates new software releases for its impact on systems, security and applications.

2. Monitors and tunes system software and third party software products; tests software systems to insure proper functioning; coordinates with development staff or DBA to solve operating problems.

3. Maintains and documents operating systems and related software; monitors the effects of programs and queries on system performance; adjust factors to improve performance; provides statistical reporting on systems, database and application transactions.

4. Diagnose and fix system malfunctions; reacts to emergency situations in a professional manner.

5. Maintains security system; controls the issue of passwords; creates user and group profiles; deletes users.

6. Designs, installs, and tests connections between computer systems with different operating systems and applications software; determines objectives of computer connections.

7. Configures systems to communicate with each other; runs programs to test connections; establishes connections with computers in other departments, agencies, and the internet.

8. Consults with vendors on the latest trends in the computer industry; performs cost/benefit analyses for various configurations of software; recommends purchase of software and hardware; assists in the selection, evaluation, and testing of new computer hardware and software.

9. Provides technical advice and training to coworkers and application users; prepares reports and coordinates upgrades and system downtime according to department procedures.

10. Perform related duties as assigned.
DESIRABLE QUALIFICATIONS

Knowledge:
Extensive knowledge of computer high level programming languages, such as, Assembler, COBOL, SQL and specific control languages.
Considerable knowledge of principles and practices of data processing using mainframe computers.
Considerable knowledge of developments and techniques in software systems design.
Working knowledge of performance management and capacity planning.
Working knowledge of English syntax and language mechanics.
Working knowledge of principles of training and communications.

Skills and Abilities:
Ability to analyze problems and take corrective action in a professional manner.
Ability to develop standards for the operation of system hardware and software.
Ability to work independently and set priorities.
Ability to coordinate functions and activities between departments and OCIS.
Ability to utilize effective oral and written communications skills.
Ability to establish and maintain effective work relationships with those contacted in the performance of required duties.

Training and Experience:
Any combination of experience and education that would demonstrate possession of required knowledge and abilities. A typical way to obtain the knowledge and abilities would be: A Bachelor’s degree from an accredited college or university in computer science, engineering, statistics or related field. Four years of data processing experience, including three years in IBM systems programming.