

Summary of Duties: Prepares programs for electronic data processing equipment by analyzing specifications developed by programmer analysts; determines computer processing requirements; develops systems and programming flow charts and codes programs for machine operations; tests, debugs, corrects errors in programs; prepares program and operational documentation; investigates, analyzes and resolves operational problems; analyzes information requirements and software capabilities required to support office systems, personal and mid-range computers and host-connected computers; and does related work.

Distinguishing Features: From program specifications prepared by programmer analysts and other professional information system personnel, employees of this class prepare and modify programs for a variety of computer-based information systems. Under moderate supervision, an Applications Programmer prepares detailed flow charts, writes, develops and tests programs and prepares program and operational documentation.

Examples of Duties: Analyzes program specifications prepared by programmer analysts in terms of the processing requirements of the respective program, the type and amount of information to be placed in or taken from storage units, the variety of items to be processed, the format of input and output of cards, tapes, disc storage, and other pertinent factors; prepares detailed flow charts indicating the sequence of computer operations necessary to process the data; does detail program coding; prepares sample data to test programs, checks computer test runs and makes any necessary program changes to ensure that all conditions required to satisfy the requirements of the program specifications are met; prepares computer operating instructions; makes modifications to existing programs required by changing user requirements or to improve operational efficiency of existing programs; makes modifications to, and prepares revised or new documentation for modified or newly developed programs; investigates, analyzes and resolves user and operational problems; performs basic network configuration and implementation tasks; maintains configuration data bases and related processing; maintains and distributes routine reporting for configuration data bases; coordinates a variety of project activities; analyzes information requirements and software capabilities required to support office systems, personal and mid-range computers and host-connected computers; and may occasionally be assigned to other duties for training purposes or to accommodate technological changes or emergencies.

Qualifications: A good knowledge of systems and program flow charts as used to described systems procedures, detailed machine operations, directions of flow and other internal data processing operations; a good knowledge of utility and service routines, program testing and debugging routines and other programming aides; a good knowledge of procedures followed in generating realistic and comprehensive test data; a good knowledge of methods of machine testing programs for errors and means of correcting various forms of programming errors; a good knowledge of COBOL or assembly language and JCL programming languages; a working knowledge of the use, capacity, characteristics and limitations of an electronic computer and peripheral equipment; a working knowledge of forms design, including physical and logical record and document layout and arrangement of data elements, records and files on external storage or on-line devices for maximum accessibility; a working knowledge of routines, subroutines, macro and micro instructions and other types of programming aids; a working knowledge of procedures used in program library maintenance;

The ability to interpret proposed systems and procedures developed by programmer analysts in order to prepare detail flow charts and develop computer instructions; the ability to develop program logic and instruction sequences that utilize core storage and processing time efficiently; the ability to recognize errors by tracing program logic and instructions while desk-checking program prior to machine processing and while reading machine language printouts; the ability to document for the benefit of users, programming and operating personnel all procedures, test, corrections, and other steps necessary for the uninterrupted implementation of programs; the ability to work tactfully with all personnel affected by new procedures, and minimize disruption to existing systems; the ability to modify programs to meet changing data processing and other requirements; the ability to interpret and analyze oral and written statements concerning a variety of computer problems and discuss them with others; the ability to evaluate a variety of reports; the ability to prepare oral and written reports and recommendations that are clear, concise, logically developed and convincing; and the ability to deal tactfully and effectively with City management, supervisors and employees.

Graduation from a recognized four-year college or university with either a major or a minor (24 semester or 32 quarter units) in Information Systems, Computer Engineering or Computer Science is required.

Physical Requirements: Strength to perform lifting of less than five pounds and occasionally over 15 pounds; good speaking and hearing ability; and good eyesight.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of

the positions in this class. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the positions, and the appointing authority's ability to effect reasonable accommodations to the limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory, and not restrictive. It is not intended to declare what the duties and responsibilities of any position shall be.