APPLICATIONS ANALYST PROGRAMMER II

This is professional work in the performance of the full range of complex analytical and programming activities in microcomputer, minicomputer, and/or mainframe environments at large computer centers, state agencies, and university departmental or school facilities devoted to business, administrative, research, academic, or scientific computation. Under the direction of a technical or administrative supervisor, employees perform analysis and some programming associated with complex maintenance, modifications, or enhancements to existing computer applications; or analysis and some programming associated with the development of complex new applications. Work in this class is distinguished from that recognized in the Applications Analyst Programmer I class by the sophistication of the analytical questions and judgments facing the employee in the maintenance or enhancement of large applications, and/or by the responsibility given the employee for the complete development of system modules for complex applications. Employees either oversee the programming activities of lower level applications programmers or perform the programming duties associated with the projects themselves. Work may include related duties as required.

I.   DIFFICULTY OF WORK:
Variety and Scope - Work in administrative computing environments involves investigating departmental operations, organizational structure, staffing, workflow, methods and procedures of operation; determining estimates of time, equipment, and personnel; determining the feasibility of automating the particular work functions; evaluating hardware and software options available; developing the logical flow of the system; designing input/output and file specifications for program creation; and writing the specifications for developing the logical flow of programming. Assignments are within several applications or research projects for a variety of users. The scope of analytical work for research projects may require some knowledge of the researcher's goals and objectives and the nature of the researcher's hypothesis or theory. Employees supervise other programmers or analysts or perform programming duties for the projects.

Intricacy - Automation projects are characterized by a variety of stated user objectives and dynamic work functions requiring flexibility in the finished product. Considerable client interaction is required to define project parameters. The analytical process is complicated by a number of variables, conflicting and often insufficient data, and the need to evaluate a number of potential solutions to the automation problem and select the best solution considering technological options available and feasibility. Proposed solutions may involve innovative use of applications development techniques or existing hardware and software technologies. Proposed solutions may require the consideration and integration of work performed by others into the final product. Project assignments may require the assignment of work to lower level programmers or analysts and the coordination of their work into the final product.

Subject Matter Complexity - For maintenance or enhancement projects, tasks require an understanding of existing computer applications and user operations to determine appropriate modifications to the applications from changes in user needs. Employees must develop a knowledge of the user work functions when developing new systems. Work requires a considerable understanding of the procedures for analyzing user work functions as they relate to the capabilities of computer hardware and software. In research or academic environments, work requires an understanding of the user's field of work, data needs, and analytical devices for manipulating the data. Work requires a thorough understanding of programming languages and other software currently in use and considerable understanding of the-types and capabilities of existing hardware. Employees must have some awareness of new hardware and software technologies.

Guidelines - Guidelines include a general description of the requested application changes for modifications or enhancements; or a description of the application or module to be developed. Other guidelines include applications programming references, computer hardware and operating system

specifications, and all other pertinent documentation. Guidelines are applicable to most situations but each individual request requires research to understand the nature of the request and its impact.

II.   RESPONSIBILITY:
Nature of Instructions - Employees receive requests for automation projects from higher level analysts or the user in administrative, research, or academic environments. Portions of more complex systems are assigned with detailed descriptions from higher level analysts or department heads.

Nature of Review - Work is performed independently and is tested and debugged prior to being placed into production. Work involving portions of more complex systems is reviewed prior to integration into the total system. Work is generally reviewed through periodic discussions with the supervisor as to project status or problems as they arise.

Scope of Decisions - The results of the product produced by the employee for larger applications or new system development impact on the users of the applications and their data requirements. Changes to components or development of a portion of an application may impact on interrelated components and other users.

Consequence of Decisions - At this level, consequences are generally more pronounced because projects tend to be larger, involve more interrelations, and are more critical.

III,   INTERPERSONAL COMMUNICATIONS:
Scope of Contacts - Work requires contact with a variety of computer users and other data processing personnel.

Nature and Purpose - Contact with users is to investigate and define requested changes of new systems and clarify program implementation. Contact with other analysts or programmers is to discuss new applications or changes to applications and their impact and programming techniques to be used. Contact with computer operations personnel is to explain or discuss production specifications. Work may require coordination of the work of lower level analysts and programmers.

IV.   OTHER WORK DEMANDS:
Work Conditions - Work is conducted in an office setting and requires the use of computer equipment.

Hazards - Employees are not exposed to workplace hazards.

V.   RECRUITMENT REQUIREMENTS:
Knowledges, Skills, and Abilities - Thorough knowledge of programming techniques, programming language(s), operating systems, and the capabilities and limitations of computer and peripheral equipment. Thorough knowledge of the principles and techniques of computer programming applications and documentation. Considerable knowledge of the analysis process. Ability to comprehend, analyze, and interpret organizational and procedural problems to make alterations to existing applications or develop new applications. Ability to plan and coordinate the work of other analysts and programmers. Ability to communicate effectively in oral and written form. Ability to establish and maintain effective working relationships.

Minimum Education and Experience - Graduation from a four-year college or university with nine semester hours in data processing and three years of progressive experience in programming and applications analysis; or graduation from a four-year college or university with a degree in computer science, information systems management or a related curriculum and two years of progressive experience in programming and applications analysis; or an equivalent combination of education and experience. A degree directly related to the technical nature of the application(s) assigned may be substituted for to six months of the experience requirement.

Degrees must be received from appropriately accredited universities.

Special Note: This is a generalized representation of positions in this class and is not intended to identify essential functions per ADA. Examples of work are primarily essential functions of the majority of positions in this class, but may not be applicable to all positions.