

**PROGRAMMER ANALYST 4****Nature of Work**

Under limited supervision, at the supervisory or technical expert level, supervises a staff of programmer analysts or performs complex systems and analysis work in the development, implementation, and maintenance of computer applications for state agencies. Supervision or technical consulting at this level requires extensive experience in information systems and the department applications. Plans projects, projects time and resource requirements, allocates staff and reviews progress. An irregular work schedule may be required of this position. Performs related work as required.

**Distinguishing Characteristics**

At this level, an incumbent will be in one of two career paths: 1) advanced information systems position where familiarity with department-wide or multiple applications and an information system specialty(ies) allows the incumbent significant latitude to perform their responsibilities; 2) supervisory role supervising three or more programmers. This position analyzes, designs, develops and implements complex computer systems such as on-line or multi-program systems. The Programmer Analyst 4 is also distinguished from the Programmer Analyst 3 by supervising a staff of programmer analysts.

**Examples of Work**

Serves as technical advisor throughout a department in an area(s) of data processing specialty.

Supervises and trains subordinate programmer analysts in complex programming and analytical techniques.

Assigns tasks, monitors the overall project progress, and reviews work upon completion.

Interviews applicants and makes selection recommendations to management; assigns staff and schedules time and leave so that projects are adequately staffed; evaluates the performance of subordinates; recommends personnel changes, promotions and disciplinary actions.

Provides input on data processing policies and standards, budgeting, and other administrative matter.

Reviews functionality and utility of hardware/software systems to develop cost/benefit ratios and select appropriate platforms for systems development and operations.

Compares viability of various software development tools for system analysis and design.

**PROGRAMMER ANALYST 4 (CONT'D)****Examples of Work (cont'd)**

- Analyzes benchmarks and other performance measurements to select appropriate languages and database for systems construction and implementation.
- Writes system specification containing detailed information such as flow charts, input and output requirements, the programming language to be used, the logic requirements necessary for writing and documenting the programs in the system.
- Initiates the training required for conversion to new system.
- Reviews design documents for clarity, completeness and accuracy.
- Analyzes the facts to determine whether the solutions presented offer the most cost/time effective solution to an agency systems problem.
- Monitors the implementation of accepted documents to ensure the system's arrival and installation.
- Analyzes agency operations and determines feasibility and/or costs of conversion from a manual to automated process or from one system to another.
- Analyzes and establishes data processing standards, methodologies and architectures.
- Meets with agency personnel to determine functions, goals and systems problems; develops solutions and documents them.
- Ensures that programmers and programmer analysts have followed established standards.
- May write requests for proposals for the purchase/lease of new hardware/software.

**Knowledge, Skills and Abilities**

- Knowledge of data base management, documentation and project control techniques.
- Knowledge of the computer and personnel resources available; the capabilities of the programming languages, hardware configurations and software packages.
- Knowledge of multiple 3rd or 4th generation programming language.
- Knowledge of complex programming systems, software and hardware configuration and their applications in a systems environment.
- Knowledge of data processing concepts and equipment usage.
- Skill in programming complex systems and in the use of hardware and software configuration.
- Ability to plan, assign, and coordinate the activities of other programmer analysts.
- Ability to evaluate and analyze user requests and develop effective work plans for systems development and maintenance to meet user requirements.

**PROGRAMMER ANALYST 4 (CONT'D)****Knowledge, Skills and Abilities (cont'd)**

- Ability to present ideas in a clear, concise format using narrative statements and logic diagrams.
- Ability to maintain effective working relationships with data processing personnel and users.
- Ability to understand complex technical manuals.
- Ability to develop and maintain complex program systems at a level comparable to on-line applications.

**Minimum Qualifications**

**Training:** Bachelor's degree from an accredited college or university in computer science or related field including but not limited to business data programming, business systems analysis, computer accounting, computer and information systems, computer servicing technologies, information systems management, data processing, or computer engineering. **OR** An Associate degree from an accredited college, university or business school in computer science or related field including but not limited to business data programming, business systems analysis, computer accounting, computer and information systems, computer servicing technologies, information systems management, data processing, or computer engineering and eighteen months of full-time or equivalent part-time paid computer programming experience in one or more programming or data base languages.

**Substitution:** Three years of full-time or equivalent part-time paid computer programming experience in one or more programming or data base languages may substitute for the required training.

**Experience:** Seven years of full-time or equivalent part-time paid experience in programming, system design and analysis work with multiple programming or data base languages.

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