STATE OF SOUTH DAKOTA CLASS SPECIFICATION

Class Title: Programmer/Analyst **Class Code: 10723**
Pay Grade: GI

A. Purpose:

Under supervision, performs all phases of the development cycle consisting of gathering requirements, system design, coding, testing, training and implementation to ensure effective development of assigned information systems.

B. Distinguishing Feature:

The Programmer/Analyst provides assistance for on-going system support by maintaining established information systems and serving on development teams for new information systems.
The Associate Programmer/Analyst learns specific platforms, operating systems, and languages in a mentoring environment; becomes familiar with agency business operations and procedures and with state standards and development methods, using this knowledge in all work assignments and assisting programming/analysis staff in solving business problems.
The Senior Programmer/Analyst works on all phases of information systems development, serves in a leadership role of peers and subordinates on development teams, acts as a mentor to other members of the programmer/analyst classification group, and maintains and supports time-sensitive systems with wide impact and visibility. At this level, the incumbent has frequent contact with clients on system design and is fully knowledgeable of the client's business and information flows, as well as the tools and technologies needed to meet client information requirements.

C. Functions:
(These are examples only; any one position may not include all of the listed examples nor do the listed examples include all functions which may be found in positions of this class.)

1. Defines client requirements within a business area to determine solutions to business problems.
   a. Meets with clients to identify and define problems.
   b. Analyzes business processes.
   c. Researches alternative technology solutions within existing tools and products.
   d. Conducts cost/benefit or feasibility analysis.

2. Designs, develops and implements information systems and enhancements to current systems to meet user needs in a mentoring environment.
   a. Designs system architecture and work flow.
   b. Identifies the source of system problems.
   c. Creates system requirements and specifications documents.
   d. Writes system code.
   e. Performs system testing.
   f. Implements system.

3. Maintains information systems and performs maintenance to existing systems.
   a. Writes, tests, and debugs computer code.
   b. Develops and applies test data to perform unit and system testing.
   c. Instructs clients on the use of new unit and system functionality.
   d. Documents computer code.

4. Performs other work as assigned.

D. Reporting Relationships:

Reports to a higher-level programmer/analyst or technical administrator. Does not supervise, but may provide training or work direction as a mentor to Associate Programmer/Analysts or other staff.

E. Challenges:

Challenged to understand client business processes and translate them into efficient computerized solutions. This requires being able to communicate with clients in non-technical terms. Further challenged to develop comprehensive testing plans and determine how required enhancements to an existing system may be applied while maintaining the system's integrity and operational status.

Typical problems include debugging code and discovering missing or inadequate requirements after construction has begun.

F. Decision-making Authority:

Decisions include architectural design recommendations, screen and report layouts, determining and creating proper test data, and priority of work within assigned area of responsibility.

Decisions referred to a superior include overall priority of work, approval of system and architecture design and project scope changes.

G. Contact with Others:

Frequent contact with clients to gather information on new or enhancements to existing information systems and to provide training on these changes. Frequent contact with other IT staff to discuss programming problems, solutions and strategies.

H. Working Conditions:

Typical office environment, subject to on-call or after-hours work to resolve system problems.

I. Knowledge, Skills, and Abilities:

Knowledge of:

- principles, theories and concepts of computer science;
- approved state tools and technologies;
- operating characteristics of the environments of assigned information systems.

Ability to:

- communicate with technical and non-technical clients and translate their needs, ideas, or suggestions into logical solutions to business problems;
- analyze and resolve information system problems;
- use and apply standard principles, theories, and concepts of computer coding and design;
- build rapport with clients;
- develop a comprehensive view of a client's business area and how it relates to other business areas.