

## **PROGRAMMER SERIES**

### **Series Specification**

#### **Programmer I**

#### **Programmer II**

#### **Senior Programmer**

### **DEFINITION**

This series specification describes three classes that have responsibility for a variety of programming duties in the organization. This class is characterized by technical performance in broad, heterogeneous and/or complex areas; or a greater degree of system and/or organizational accountability.

### **DISTINGUISHING CHARACTERISTICS**

**Programmer I:** This is an experienced programmer. Under general supervision, incumbents perform specific, complex technical duties.

**Programmer II:** This is an experienced Programmer I, or equivalent, who has broad levels of responsibility, works in more complex system environments or is primarily responsible for a major technical area and performs with minimal supervision.

**Senior Programmer:** This is the lead position in this class. Incumbents may function as team leaders and/or technical specialists. This position is distinguished from IT Assistant levels I and II by the amount of responsibility, leadership and discretion exercised, expertise demonstrated, and complexity and scope of work performed.

### **TYPICAL DUTIES**

**Programmer I & II:** Assists end users with hardware, software, applications and/or network usage. Develops specifications, descriptions, and operating instructions. Performs system analysis on projects of moderate scope. Serves as technical advisor to college and District staff. Designs, codes and tests new program modules or revisions to existing programs. Produces detailed program specifications from general needs analysis. Creates test data and creates and implements test plans. Maintains code documentation and maintains and enforces version tracking. Works with campus and District technicians, specialists, and analysts to implement and maintain needed connectivity and resolves network connectivity problems. Adapts to new systems by creating new ways of performing old processes. Performs related duties as required.

**Senior Programmer:** In addition to the typical duties of a Programmer I & II; Acts as a focal point for requests, problems, and issues affecting the unit. Assigns and monitors staff assignments and special projects. Assists in development of installation and maintenance procedures. Assists technical staff in solving system problems. Assigns system resources as needed. Leads and participates in projects. Leads the planning of migrations to new/improved hardware and software products. Leads the development of procedures, policies, and guidelines for the operation of the unit. Leads the planning, design, and maintenance of complex systems. Provides leadership, direction and training to Programmers and contract employees. Provides technical architectural and modification guidelines. Assists end users with

hardware and software applications and/or network usage. Develops specifications, descriptions, and operating instructions. Performs system analysis on projects of major scope. Serves as technical advisor to college and District staff. Designs, codes and tests new program modules or revisions to existing programs. Produces detailed program specifications from general needs analysis. Creates test data and creates and implements test plans. Maintains code documentation and maintains and enforces version tracking. Works with campus and District technicians, specialists, programmers, and analysts to implement and maintain needed connectivity and resolves network connectivity problems. Adapts to new systems by creating new ways of doing old processes. Performs related duties as required.

## **QUALIFICATIONS**

### **EDUCATION/ EXPERIENCE**

**Programmer I:** An Associate degree in computer sciences or closely related field (or completion of an equivalent certificate program) and three years' experience directly related to job duties; OR, a combination of training and/or four years' experience with related job duties likely to have provided the required level of knowledge and abilities.

**Programmer II:** An Associate degree in computer sciences or closely related field (or completion of an equivalent certificate program) and two years in class of Programmer I; OR, an Associate degree in computer sciences or closely related field (or completion of an equivalent certificate program) and four years' experience directly related to job duties; OR, a combination of training and/or experience totaling six years that is likely to have provided the required level of knowledge and abilities.

**Senior Programmer:** An Associate degree in computer sciences or closely related field (or completion of an equivalent certificate program) and two years in class of Programmer II; OR, an Associate degree in computer sciences or closely related field (or completion of an equivalent certificate program) and five years' experience directly related to job duties; OR, a combination of training and/or experience totaling eight years that is likely to have provided the required level of knowledge and abilities.

### **KNOWLEDGE OF**

**Programmer I, II and Senior Programmer:** Knowledge of computer operating systems, hardware, telecommunications and network systems; technical problem solving; and team dynamics, team building and workgroup interaction. Knowledge of programming functions; computer programming techniques and concepts; and relevant programming languages. Knowledge of computer data file methods; computer operation concepts; and standards relating to programming and documentation. Knowledge of software development tools, RAD tools, Visual tools, authoring tools, and version tracking tools; object-based software development tools and applications; and software development in a heterogeneous operating system environment. Knowledge of structured testing techniques, including Unit, Integration, and Regression testing; and relational database system concepts and methods.

**Senior Programmer:** Knowledge of current industry information, vendor direction, new products and new technical architectures; software licensing, intellectual property rights and copyright law; and software systems development life cycle. Knowledge of local area networking and Internet computing technologies; effective communication techniques; and project terminology and practices. Knowledge of information system problem management and change management; concepts of asset management; and effective leadership and project management. Knowledge of organizational processes, practices, and policies; business system applications; and methods of long-term technology assessment and deployment.

## **SKILLS IN**

**Programmer I, II and Senior Programmer:** Skill in developing an image of how a system should work under ideal conditions; identifying the nature of problems; and problem solving; understanding written sentences and paragraphs in work related documents; communicating effectively with others orally and in writing as indicated by the needs of the audience; and listening to what other people are saying and asking questions as appropriate.

**Senior Programmer:** Skill in controlling the operations of equipment or systems; determining the kind of tools and equipment needed to do a job; and reorganizing information to get a better approach to problems or tasks. Skill in using logic and analysis to identify the strengths and weaknesses of different approaches; and determining the long-term outcomes of a change in operations.

## **ABILITY TO (ESSENTIAL FUNCTIONS)**

**Programmer I, II and Senior Programmer:** The ability to perform the Programmer I and Programmer II functions of the position; sustain regular work attendance; work cooperatively and effectively with users, vendors, faculty, students, staff, peers, and management; exercise initiative and mature judgment; work as a member of a team; and develop and meet schedules and time lines. The ability to learn and adapt to new technologies, procedures and policies; work independently with minimum supervision; and plan, organize, prioritize, and complete the workload of assigned areas of responsibility. The ability to perform individual research, analysis, and evaluation of systems and programs; develop and present technical briefings and specifications; and collect and analyze data utilizing computer applications as appropriate.

**Senior Programmer:** The ability to perform the functions of the position series. The ability to understand and explain complex procedures and instructions; learn and lead implementation efforts related to new technologies, procedures and policies; and plan, organize, and direct work and assignments. The ability to provide team leadership and direction; prioritize and coordinate activities with vendors, users, and staff and work independently with minimum supervision and develop, coordinate, and enforce organization-wide information systems standards.

## **TYPICAL EQUIPMENT USED (May include, but not limited to)**

Current office technologies including computers, printers, copiers, and fax machines.