

**DEPARTMENT:** NCCC  
**CLASSIFICATION:** COMPETITIVE  
**APPROVED:** SEPTEMBER 23, 2022

**PROGRAMMER/ANALYST**

**DISTINGUISHING FEATURES OF THE CLASS:** This position is responsible for analyzing, designing, and programming computerized solutions to improve the productivity and efficiency of the college. The work is carried out in accordance with sound, modern, up-to-date methods, techniques, and procedures as utilized for implementation of information technology systems, and involves the study and analysis of systems and their adaptation to available computer resources; conferring with user departments to determine their information technology needs and to devise automated information technology solutions; analyzing the flow of information and its adaptation for computer use; developing and maintaining appropriate documentation. The incumbent researches reported problems, plans and proposes a solution, recommends software and systems, coordinates the problem solving process, selects the best solution, and ensures that the college standards and requirements are met. The incumbent performs professional data analysis activities and collaborates with higher level staff to develop business intelligence solutions. Direct supervision is received from the Director, User & Administrative Technology Services. The incumbent exercises independent judgment in carrying out the details of the work in accordance with established policies and procedures. Supervision of subordinates is not a feature of this class of positions. Does related work as required.

**TYPICAL WORK ACTIVITIES:**

1. Performs typical programming duties which may include: designing, developing, creating, modifying, upgrading and documenting complex applications programs, on major interactive and/or administrative systems, having interrelationships with other programs and involving complex logic relationships; reviewing and improving programs formulated by lower levels in this series; developing standard program design and logic features; analyzing complex applications programs and performance requirements and developing program alternatives; and advising users and user groups of the feasibility and design of computer programs or projects;
2. Organizes and executes systems analysis and design tasks for implementation to existing and new information technology systems, which includes: consulting with users to ascertain required project scopes and results; analyzing work procedures to identify those which are adaptable to computer applications; performing cost benefit analysis and feasibility on computer applications; devising/applying plans to upgrade from manual methods to computerized systems; preparing workflow diagrams and structuring charts to define workflow processes; developing models that document data stored and work processes performed; defining interface and communications requirements; consulting with vendors to ascertain the products available to meet the customers' needs; acting as a liaison between the customer and vendor personnel that support purchased software; processing software trouble reports and analyzing the system to determine possible problem areas; working on complex reporting requirements and providing data extraction and analysis for software purchased from an outside vendor; and recommending hardware and software to meet user needs; preparing system and programmatic documentation;
3. Interacts extensively with external or internal clients; and translates requirements of the user into highly technical specifications;
4. Plans testing schedules for completing the system operations and supervises the proper implementation of a new system;
5. Provides training for computer users by: assessing the training needs to identify types and contents of training; selecting training methods to be used; providing instruction in a formal classroom setting or on a one-to-one basis; developing and/or reviewing user manuals, training materials and related forms, and by providing in depth support for specific applications;
6. Operates a microcomputer and utilizes a variety of software programs and related peripheral equipment;
7. Collaborates with business units to develop and build models in support of analytic use cases; drafts technical requirements and data definitions; provides input on current approaches and recommends improvements to best achieve goals; reviews and suggests improvements to current or planned systems and processes; performs data extraction, aggregation, and quality checks from multiple sources and tables in support of trend identification and root cause analysis; summarizes results, creates written reports and collaborates with staff to develop business intelligence solutions.

**CONTINUED**

## **PROGRAMMER/ANALYST CONTINUED**

### **FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES & PERSONAL CHARACTERISTICS:**

Thorough knowledge of modern methods, principles, techniques and concepts utilized in performing computer programming and systems analysis; thorough knowledge of electronic computer programming principles, techniques and concepts; thorough knowledge of modern techniques, up-to-date methods, and procedures as utilized for implementation of information technology systems; good knowledge of a 4GL (object-oriented, event-driven) computer programming language; thorough knowledge of techniques of data extraction, aggregation, and quality checks drawn from multiple sources and tables in support of trend identification and root cause analysis; working knowledge of business intelligence platforms, data visualization, statistical models, and data mining tools; working knowledge of modern training methods; working knowledge of project management; demonstrated ability to develop, prepare, and deliver process procedure documentation; skill in operating a micro-computer and software suite products; problem-solving skills; ability to plan, develop and administer information technology systems; ability to train others; ability to oversee information technology projects; ability to understand and interpret complex oral instructions and/or written directions; ability to analyze and organize data and prepare records and reports; ability to perform close, detailed work involving considerable visual effort and concentration; ability to communicate effectively both orally and in writing; ability to establish and maintain effective working relationships with others; sound judgment; integrity; tact; courtesy; physical condition commensurate with the demands of the position.

### **MINIMUM QUALIFICATIONS:**

#### **SUGGESTED PROMOTIONAL QUALIFICATIONS:**

Two (2) years of permanent competitive status as a Computer Programmer at Niagara County Community College immediately preceding the date of examination.

#### **OPEN COMPETITIVE QUALIFICATIONS:**

Graduation with a Bachelor's Degree in data processing, computer information systems, computer engineering, computer information, informatics, economics, statistics, mathematics, or closely related field **and** four (4) years of full-time, paid experience, which involved demonstrated responsibility and ability in one of the following areas: the design and development of computer programs in a 4GL programming language such as SQL, PL/SQL, Java, Javascript; process and application analysis; utilization of business intelligence platforms such as Tableau or Power BI, data visualization, statistical models, and data mining tools.

#### **NOTE:**

1. Coursework in the required fields beyond a Bachelor's Degree may be substituted for the required experience (three credits equals three months of experience.);
2. Degrees and/or credit hours must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education.