

*Code: 1464*

*Title: PROGRAMMER/ANALYST-SENIOR*

**SUMMARY:** This classification is responsible for informational systems design and applications programming for County departments. It is distinguished from Programmer/Analyst, which is responsible for systems analysis and maintenance of a specific applications system in a County department.

**DUTIES/RESPONSIBILITIES:** (Work assignments may vary depending on the department's needs and will be communicated to the applicant or incumbent by the supervisor.)

Assists users in determining specific system requirements and devises means of achieving desired end results;  
Designs system and defines problems by preparing flow charts, designing forms, and establishing output requirements;  
Codes, tests, and debugs new programs and modifies existing programs;  
Establishes schedules for analysis, programming, and project completion/implementation;  
Designs, modifies, and implements data base systems;  
Determines the impact of proposed projects on current work loads and defines the interface between proposed projects and existing systems, software, and hardware;  
Performs technical reviews of operating systems to identify and correct system problems;  
Assists users in performing operational evaluation of installed systems and in making system adjustments to increase effectiveness;  
Designs, modifies, and implements networking systems;  
Evaluates computer hardware and software for effectiveness and applicability;  
Prepares and directs the preparation of documentation;  
Modifies vendor-supplied utilities and packages to fit existing systems and equipment;  
Provides technical training to professional and paraprofessional staff.

**KNOWLEDGE & SKILLS:**

Knowledge of:

- principles and techniques of applications programming and systems analysis applicable to area of assignment, to include data communications and database design and associated modules and sub-routines;
- principles and techniques of block diagramming and flow-charting;
- machine language(s) applicable to area of assignment;
- operating principles, capabilities and limitations of information processing systems, modules, subroutines, utility programs, compilers, assemblers and other computer software;
- principles and techniques for the adaptation of office procedures to information processing systems;
- principles and techniques for development and maintenance of data communications, security and privacy measures;
- mathematics and statistical methods applicable to the use of information processing systems;
- research methods including the design, analysis and documentation of results;
- effective training, leadership, and communications techniques.

Skill in:

- analyzing applications programs and system operations and organizing their component parts into logical order;
- project planning, to include development and preparation of program block diagrams and flow-charts;

- develop or revise programs to analyze program effectiveness, using appropriate machine language(s);
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- identifying, analyzing, and resolving programming problems applicable to information processing systems, to include problem-avoidance;
- designing, implementing and maintaining data communications, security and privacy measures for assigned programs or systems;
- organizing, conducting, analyzing and documenting computer program research and development;
- training other staff in programming and systems analysis techniques;
- communicating effectively.

MINIMUM QUALIFICATIONS:

EITHER:

(1) A Bachelor's degree from an accredited college or university with a major in computer science, computer engineering, management information systems, or closely related field, and one year of programming experience in at least two of the following areas: Compiled Languages, Windows Programming Languages, Web Development, SQL, or relational database systems.

(Additional relevant programming experience may substitute for the educational requirement.)

OR:

(2) An Associate's degree from an accredited college, university or technical school in computer science, information systems, programming or systems analysis and three years of programming and systems analysis to include at least two of the following areas: Compiled Languages, Windows Programming Language, Web Development, SQL or relational database systems.

OR:

(3) Three years of experience with Pima County as a Programmer/Analyst.

OTHER REQUIREMENTS:

Licenses and Certificates: Some positions may require specialized certification or licensure relative to assignment at time of appointment or prior to completion of an initial or promotional probation period. Some positions may require an industry-recognized certification, such as certified network engineer (CNE), MCSE, etc. Failure to obtain/maintain required licensure/certification shall be grounds for termination.

Special Notice Items: Some positions may require satisfactory completion of a personal background investigation, polygraph examination and/or pre-/post-appointment drug-testing by law enforcement agencies due to need for access to law enforcement, corrections or Courts facilities, property and associated confidential and sensitive information, documents, communications and database systems.

Physical/Sensory Requirements: Physical and sensory abilities will be determined by position.

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.