

*Code: 4214*

*Title: SOFTWARE ENGINEER – CENTRAL IT*

**SUMMARY:** Designs, develops and implements software applications for user departments within Pima County. This classification is unique to the County's centralized Information Technology 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.)

Designs, configures, installs, tests and monitors diverse software applications for Pima County departments;  
Performs product design and programming activities;  
Performs debugging, unit testing and beta support on assigned projects;  
Consults with other technical staff, contractors and vendors to design software solutions for new applications;  
Codes, tests and debugs new programs and modifies existing programs;  
Modifies vendor-supplied utilities and packages to interface with existing systems and equipment;  
Conducts research and analysis relevant to area of assignment;  
Performs implementation and maintenance of product modules and sub-systems;  
Prepares technical documentation of product sub-systems;  
Conducts research to stay abreast of the latest software development methodologies;  
Documents code, applications and operations manuals.

**KNOWLEDGE & SKILLS:**

Knowledge of:

- principles and techniques of applications programming applicable to area of assignment;
- 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 and sub-routines;
- 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 for generating reports;
- effective training and communication techniques.

Skill in:

- developing and preparing program block diagrams and flow-charts;
- develop or revise programs, using appropriate machine language(s);
- identifying, and resolving programming problems applicable to information processing systems;
- designing, implementing and maintaining data communications, security and privacy measures for assigned programs and/or systems;
- organizing, conducting, analyzing and documenting computer program research and development;
- training other staff in programming and systems analysis techniques;
- performing research and generating reports;
- communicating effectively.

MINIMUM QUALIFICATIONS:

1. A Bachelor's degree from an accredited college, university or technical trade school with a major in a Computer or Information Technology discipline or a closely related degree as determined by the Appointing Authority at the time of recruitment.

OR

2. An Associate's degree from an accredited college, university or technical trade school with a major in a Computer or Information Technology discipline or a closely related degree as determined by the Appointing Authority at the time of recruitment and two years of software development experience.

(Additional relevant experience/education from an accredited college, university or technical trade school may be substituted)

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.

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 classification 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.