

NATURE OF WORK IN THIS CLASS:

This is complex professional systems programming work involved in the design, programming and maintenance of computer software and hardware.

Employees in this class perform the full range of duties in systems software maintenance and evaluation and perform systems test of modified software. Employees may supervise the work of subordinate programmers and systems analysts.

ILLUSTRATIVE EXAMPLES OF WORK: (These examples do not list all the duties which may be assigned; any one position may not include all the duties listed.)

Designs and analyzes server configurations to optimize and maintain system hardware and firmware; executes installations, re-installations, patching and programming to address security vulnerabilities; maintains stability and performance by utilizing various monitoring and remote deployment tools.

Implement and maintain network environments by performing firmware and software updates; tests network connectivity and performance; maintains network security and stability.

Evaluates and implements software tools to enhance system efficiency and functionality.

Designs and maintains databases to ensure data integrity, control and accessibility by implementing data validation rules, enforcing access controls, utilizing audit trails and conducting regular backups.

Develops and documents backup and restoration procedures for system recovery; identifies critical data categorization and recovery objectives and processes.

Responds to cybersecurity threats by implementing and monitoring IDS/IPS; coordinates with internal and external cybersecurity partners.

Performs log and malware analysis, performs network and vulnerability scans; develops mitigation and recovery strategies.

Analyzes new or modified software and conducts parallel tests with production systems; defines system requirements; designs comprehensive test cases and sets up test environments that mirror production and analyzes results for early issue detection and mitigation.

Collaborates and coordinates with system engineers and vendors to report and troubleshoot critical issues to ensure system success and availability.

Analyzes and evaluates the impact of information technology on organizational structure, management techniques and strategies.

Prepares comprehensive administrative and technical documentation and reports for research and deployment; prepares reports for management review and implementation.

Provides orientation and training to users on new or modified system software and hardware.

Perform routine audits on physical and logical access; assists with federal and local audit reviews and reporting.

Maintains data security compliance in the handling of confidential or sensitive data in accordance with the Internal Revenue Service (IRS), Social Security Administration (SSA), Health Insurance Portability and Accountability Act (HIPAA), and the Criminal Justice Information Services (CJIS).

Performs other related duties as assigned.

MINIMUM KNOWLEDGE, ABILITIES AND SKILLS:

Knowledge of computer programming principles, techniques, and practices.

Knowledge of computer operating capabilities.

Knowledge of computer hardware and software, applications and systems programming.

Knowledge of server management and endpoint operating systems.

Knowledge of firewall, routing and network management.

Knowledge of user endpoint protection and security management.

Knowledge of coding languages such as SQL, HTML, C#, C++, Javascript, Python and PHP.

Ability to design systems hardware and software in accordance with specifications.

Ability to perform maintenance of new software systems.

Ability to analyze and develop solutions to system issues.

Ability to establish system and operating standards and policies.

Ability to secure and maintain confidentiality of data systems, server systems and endpoints from cyber threats.

Ability to think logically and apply sound judgment in analyzing and organizing problems or work processes for computer solution.

Ability to work effectively with employees, officials, vendors, contractors and the general public.

Ability to communicate clearly and concisely, both orally and in writing.

Ability to maintain records and prepare technical reports and papers.

Skill in computer systems programming.

Skill in the management of hyperconverged server and storage systems, firewalls, network infrastructure.

Skill in cybersecurity monitoring and use of mitigation tools and backup appliances.

MINIMUM EXPERIENCE AND TRAINING:

- A. Four (4) years of specialized experience in application programming and systems analysis and graduation from an accredited or recognized college or university with a Bachelor's degree in computer science, business administration, mathematics or related field; **or**
- B. Any equivalent combination of experience and training which provides the minimum knowledge, abilities, and skills.

NECESSARY SPECIAL QUALIFICATIONS:

Possession of a valid Guam driver's license.

AMENDED: AUGUST 2025

ESTABLISHED: JULY 1980

PAYGRADE: P (GPP)

FLSA STATUS: EXEMPT

**INFORMATION TECHNOLOGY SYSTEMS PROGRAMMER
(Proposed)**

2.624

HAY EVALUATION:	KNOW-HOW:	E II 2	304
	PROBLEM SOLVING:	E 3 (38%)	115
	ACCOUNTABILITY:	E 2 C	<u>132</u>
	TOTAL POINTS		551

This standard revises and supersedes the standard established in July 1980.

EDWARD M. BIRN, Director
Department of Administration

LOURDES A. LEON GUERRERO
Governor of Guam