

**SYSTEMS PROGRAMMER 1****Nature of Work**

Under general supervision, an employee in this class performs work of considerable difficulty to provide software support through installing and maintaining software systems such as TSO, IMS, TMS, SAS, CICS, WYLBUR, or other major subsystems. Work includes monitoring, debugging, updating and controlling software packages which interface with application programs of the various users. The incumbent works closely with higher level Systems Programmers on the more complex aspects of installations to assure compatibility with existing software/hardware environment. The incumbent participates in self-study and on-the-job training to improve skills in complex systems programming. An irregular work schedule and on-call duty is required of the position. May function as a consultant in the choice of installation and implementation of office automation equipment and software; the assignments involve multiple application, multiple platforms and complex, interdepartmental communications. Performs related work as required.

**Distinguishing Characteristics**

Systems Programmer 1 provides software support for systems which affect a large percentage of the user community. Errors in judgment at this level could affect a number of user operations for a period of time; however, the central mainframe system would continue to operate. Systems Programmer 2 provides support for major software systems; errors in judgment at this level could shut-down the entire central mainframe system.

**Examples of Work**

- Installs and maintains systems software packages or data base management and data communications systems.
- Receives advanced training to improve techniques and methodologies used in support of complex host resident software packages.
- Monitors computer performance to identify, correct and/or improve the operational efficiency of the hardware/software configuration.
- Provides technical assistance to programmer/analysts or other personnel to resolve problems of the interfacing of application programs with systems software.
- Documents the availability of new software subsystems by writing information for the first-time users in lay terms and for the highly technical users in technical terms.
- Recovers lost files or restores damaged files in the systems.
- Receives advanced training and studies to improve techniques and methodologies in order to utilize the various complex software packages currently installed.
- Studies current technical literature to become familiar with new products.

**SYSTEMS PROGRAMMER 1 (CONT'D)****Examples of Work (cont'd)**

Attends demonstration meetings held by hardware/software vendors to evaluate new products.

**Knowledge, Skills and Abilities**

Knowledge of two or more computer programming languages (COBOL, PL/1, assembler, etc.).  
Knowledge of the use and limitations of data processing equipment and of systems design techniques.  
Knowledge of the design, execution and operation of host resident software such as operating systems, data base management or data base communications systems.  
Ability to learn the programming languages used in operating systems or software packages.  
Ability to logically solve data processing problems.  
Ability to read, understand and reference technical manuals.  
Ability to evaluate technical proposals and to communicate effectively with user personnel and others on technical issues, both orally and in writing.

**Minimum Qualifications**

**Training:** Graduation from an accredited four-year college or university with twelve semester hours credit in computer science.

**Substitution:** Additional experience as a programmer/analyst or systems programmer may substitute for the required training on a year-for-year basis. Only systems programming experience can substitute for the twelve semester hours credit in Computer Science.

**Experience: (1)** Two years of full-time or equivalent part-time paid experience as a systems programmer. **(2)** For promotional purposes, two years of experience as a programmer/analyst.

**Substitution:** A Certificate in Computer Programming (CCP) in systems programming may substitute for one year of the required systems' experience.

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