



JOB FAMILY CONCEPT

This job family consists of eight levels of Information Systems Technical work distinguished by the complexity of the responsibilities assigned and characterized by the type of equipment, operating systems or subsystems supported. Positions in Information Systems job families are responsible for following procedures, protocols, processes and regulations set forth in University of Alaska Board of Regents Policy and Regulation (02.07 – Information Resources). This job family is distinguished from the Information Systems Professional in that its main emphasis is on installing, maintaining, and troubleshooting network and information technology systems and assisting with their on-going use and operation. The Information Systems Professional job family emphasizes the application of theoretical knowledge, system design, programming, and large project management. However, Information Systems Technician positions may perform elements of systems analysis and administration, but not as the primary responsibility of the position. Positions fall into two broad categories (1) operations which involve technical support in completing productions requirements for reports and other batch processing services provided by a computer operating system and (2) technical support which involves highly technical work in implementing and maintaining IS systems.

Responsibilities may include performance or supervision of operational or highly technical work in implementing and maintaining personal computer systems, local area networks, customer workstations, network components, AV systems, and other automation equipment.

Positions in this job family assist with or are responsible for the following activities:

- Monitors, tests and analyses computer operation functions
- Stage production runs and maintain production schedule
- Operate personal computers and equipment
- Provide software and equipment instruction to users
- Maintain accuracy of database information
- Implement and maintain personal computer systems, local area networks, customer workstations, and network components
- Support Micro-computer, LAN/WAN, audio/video teleconferencing, and related networks
- Configure personal computers
- Set up networks
- Research and integrate emerging technologies into the campus infrastructure
- Lead or supervise staff

TYPICAL FUNCTIONS

The typical functions listed are typical examples of work performed by positions in this job classification. Not all functions assigned to every position are included, nor is it expected that all positions will be assigned every typical function.

- **Data entry and word processing are administrative tasks and are not included in the Information Systems job family.**



- Complete production requirements for reports and other batch processing services provided by computer operating system. Operate a variety of data processing equipment, terminals, printers, consoles or other peripheral devices, reviewing and analyzing job requests, determining production requirements, conferring with users, monitoring jobs in process, opening and closing data bases, monitoring jobs within the central processing unit, identifying problems, initiating corrective actions and maintaining tapes, discs, production manuals and other materials.
- Complete cable installations, addressing of controller/director configurations and IPLs of various controller equipment; complete regularly scheduled systems checks of UPS, fire prevention systems, water detection systems, generator systems, chiller systems, and physical security systems. Document and prepare operational files/manuals of applications, hardware and software processes; maintain library of tapes, discs, and other materials.
- Perform highly technical responsible work in providing computer services and office automation support related to: implementing and maintaining personal computer systems, local area networks, customer workstations, network components, other automation equipment and devices, and/or configuring audio/video equipment for network use. Diagnose and resolve technical problems with applications and software, customer workstations, servers, network components, office automation equipment and related systems and devices.
- Serve as a specialist in the various electronic data processing systems; make recommendations regarding training and equipment needed for office automation; maintain security of computer identifications and/or passwords; change tapes as needed. Maintain computer equipment, printers and other devices. Assist in the development and placement of new forms and documents on the system.
- Confer with and train users, or review requests for services or other information to identify requirements for information services; coordinate with operations or applications staff, contractors, or vendors as needed to provide required services or support.
- Coordinate requirements for testing, production, scheduling and other actions between technical and operations units; assist in reviewing and analyzing problems and determining solutions.
- Provide network support to operational computer networks by assembling and configuring network components and associated services; set up and maintain basic network operations, including assembly of network hardware, troubleshooting problems and providing assistance to the network administrator.
- Monitor network; diagnose and correct problems to ensure that network is available to all system users; and resolve data communications problems
- Plan, coordinate, and implement security measures to safeguard information in computer files against accidental or unauthorized modification, destruction, or disclosure; regulate access to computer data files, monitor data file use, and update security files.
- Develop, write, and edit computer-related technical and administrative documentation and publications.
- Install and repair data communications lines and equipment for computer system.



- Supervise operational and/or network staff engaged in operating, monitoring or installing data processing or communication systems. Develop annual employee work plans. Coordinate staff training to ensure technical knowledge is maintained at the level necessary to use current hardware and software, and retain a high production level. Recommend hiring selections, evaluate performance, provide staff feedback, and initiate corrective action when necessary.

LEVELS AND COMPETENCIES

The primary distinction between levels is reflected in the Level Descriptors. As levels increase, scope, complexity and degree of independence increase. Higher levels may perform duties of lower levels. Education and experience are stated at the minimum threshold for the level. Additional education or experience may be desirable for some positions.

This job family consists of eight levels – four operations levels and four network levels:

Operations Levels: 1-4

Network Levels: 5-8

Level 1 – Operations

PCLS: 02061

**Grade 75
Non-Exempt**

Descriptors

Work is performed under direct supervision. Scope of tasks is somewhat limited. Normally has access to higher-level technical staff for assistance in problem resolution. Generally works within well-defined guidelines in supporting computer system operational activities. Completed assignments are reviewed for conformance with timelines, standards, policies and procedures.

Knowledge, Skills and Abilities

Demonstrated general working knowledge of data processing functions, computer system operations, telecommunications networks and a variety of basic software applications. Knowledge of applications and telecommunication functions. Ability to operate a variety of personal computers and related equipment. Ability to interpret system data structures, provide training support and act as customer advocate.

Education and Experience

High school graduation and 6 months experience in a relevant field or an equivalent combination of training and experience.

Level 2 – Operations

PCLS: 02062

**Grade 76
Non-Exempt**

Descriptors

Work is performed under general supervision. Tasks often do not have clearly defined processes. Applies considerable analysis to resolve significant operational problems. Complicated or unusual problems are referred to supervisor. Install, maintain, update, and repair desktop computing



hardware and software. Functions include equipment logistics, system setup and configuration, system security, software installation, preventive maintenance, attaching workstations to networks, Internet, and departmental and campus LAN server.

Knowledge, Skills and Abilities

Same as level one, plus: Knowledge of networks and information technologies including hardware and software, network and workstation configuration, system administration, database development and administration, data and network security, documentation, programming languages, and elements of system analysis and integration. Working knowledge of PC platforms, configuration of workstations and devices, application of diagnostic utilities, and operation and troubleshooting methodologies of related applications. Demonstrated problem solving skills in the areas of data processing functions and computer system operations. Ability to identify and resolve operational problems. Ability to maintain security integrity of computer facility and act as system administrator for multiple servers and software packages. Ability to maintain hardware for all computer systems; perform major system hardware and software troubleshooting; perform extensive groundwork for development of test data and test criteria to debug software systems including verification of layered software.

Education and Experience

1 year college coursework in a relevant field (i.e. Information Technology or other related field) and 1 year experience, or an equivalent combination of training and experience.

Level 3 – Operations

PCLS: 02063

**Grade 78
Non-Exempt**

Descriptors

Work is performed under administrative supervision. Tasks often do not have clearly defined processes. Analyze and resolve significant operational problems, or take a lead** role in training others to identify and resolve operational problems. May serve as a team or project leader.

Knowledge, Skills and Abilities

Same as level two, plus: Advanced knowledge of communication systems, diagnostic techniques, theory, methods, practices and procedures for a wide range of computer systems, platforms, applications, data communications, service tracking and other applications used in help desk services. Ability to communicate effectively. Ability to lead** and train staff to identify and resolve or refer operational problems in data processing and computer operation systems and related technology. Ability to install complex system software. Ability to troubleshoot customer side applications in a variety of configurations and hardware platforms; install, administer and update web server software, accounts, and procedures.

Education and Experience

Associate's degree in a relevant field (i.e. Information Technology or other related field) and 3 years experience, or an equivalent combination of training and experience



Level 4 – Operations
PCLS: 02064

Grade 79
Non-Exempt

Descriptors

Work is performed under general direction. Supervise** a major operational unit or work group, or is recognized as the expert resource for a major functional area. Independently evaluate and meet complex system, application, project or operational needs in assigned area of responsibility.

Knowledge, Skills and Abilities

Same as level three, plus: Knowledge of principles of personnel management. Project coordination skills. Ability to supervise**, train, and evaluate staff. Ability to coordinate and direct the most complex and sophisticated network systems. Ability to solve a variety of complex problems related to computer operations systems including diagnosing and troubleshooting problems with applications, software and hardware.

Education and Experience

Associate's degree in a relevant field (i.e. Information Technology or other related field) and 4 years progressively responsible experience, or an equivalent combination of training and experience.

Level 5 – Networks
PCLS: 02065

Grade 77
Non-Exempt

Descriptors

Work is performed under general supervision. Generally works within well-defined guidelines in implementing and maintaining computer networks. Scope of tasks is somewhat limited. Complicated or unusual problems are referred to supervisor. Completed assignments are reviewed for conformance with timelines, standards and policies/procedures. Functions include equipment logistics, system setup and configuration, system security, software installation, preventive maintenance, and workstation connections.

Knowledge, Skills and Abilities

Same as level 4, plus: Ability to install maintain, update, repair desktop computing hardware and software. Ability to manage equipment logistics, system setup and configuration, system security, and software installation. Ability to perform preventive maintenance, and attach workstations to networks, Internet, and departmental and campus LAN servers. Ability to implement computer networking technologies and methodologies and operate a variety of personal computers and related equipment.

Education and Experience

1 year college coursework in a relevant field (i.e. Information Technology or other related field) and 2 years experience, or an equivalent combination of training and experience.



Level 6 – Networks
PCLS: 02066

Grade 78
Non-Exempt

Descriptors

Work is performed under intermittent supervision. Generally works within well-defined guidelines in implementing and maintaining computer networks. Complicated or unusual problems may be reviewed by a supervisor. Recurring or usual assignments typically are reviewed for conformance with timelines, standards and policies or procedures. Tasks are more complex* than the lower level.

Knowledge, Skills and Abilities

Same as level five, plus: Advanced knowledge of operation and technical applications. Ability to detect problems with equipment logistics, system setup and configuration, system security, and software installation.

Education and Experience

Associate's degree in a relevant field (i.e. Information Technology or other related field) and 2 years experience, or an equivalent combination of training and experience.

Level 7 – Networks
PCLS: 02067

Grade 79
Non-Exempt

Descriptors

Work is performed under administrative supervision. Tasks generally have no defined processes for problem resolution. Requires considerable analysis of conflicting issues for resolution of technical problems associated with the computer network. Assist with designing and configuring large, complex, multiple WAN/LAN server systems for public and internal access, and with administering those systems at the system and user group levels. Provide full support of microcomputers, and assist with development of standards for hardware, software and associated training. Responsible for systems administration, contract administration and limited programming. May provide guidance to others. May serve as a team or project leader.

Knowledge, Skills and Abilities

Same as level six, plus: Demonstrated general working knowledge of automated information, communication and networking systems principles and techniques. Demonstrated advanced knowledge of computer networking technologies and methodologies. Ability to identify, diagnose and resolve complex network problems. Ability to install, cable, and configure voice, data, and video network components in accordance with IS engineering specifications, and with codes, regulations, standards and policies. Ability to perform new equipment bench testing, burn-in, and acceptance procedures.

Education and Experience

Associate's degree in a relevant field (i.e. Information Technology or other related field) and 4 years experience, or an equivalent combination of training and experience.



Level 8 – Networks
PCLS: 02068

Grade 80
Exempt

Descriptors

Work is performed under general direction. Serve as a specialist focusing on specific network areas related to projects, or may lead** a work group or project, or supervise** a team managing a network.

Knowledge, Skills and Abilities

Same as level seven, plus: Demonstrated expert in subject matter with advanced knowledge of the operation and maintenance of networks and network communications systems, including WAN/LAN, high speed networks, public telecommunications, Internet and other network technologies. Knowledge of microcomputers, configuration software, operating systems, and a wide variety of applications. Knowledge of methods of installing and maintaining network systems, PCs and workstations and operating systems by performing troubleshooting and by applying knowledge of cabling standards and installation standards. Ability to lead**, train, and evaluate lower level staff and to problem solve a variety of network and computer operations systems problems or to implement and maintain personal computer systems, local and wide area networks, customer workstations, network components, and other automation equipment including diagnosing, troubleshooting and resolving problems with applications, software and hardware. Ability to supervise**.

Education and Experience

Associate's degree in a relevant field (i.e. Information Technology or other related field) and 6 years progressively responsible experience, or an equivalent combination of training and experience.

- * **Complexity**: Complexity increases as projects impact more users, units, departments, the MAU, or the system. Complexity also increases as projects and tasks become more difficult to analyze, and require more innovative approaches to solve non-routine problems. Complexity increases as issues become more conflicting. Complexity also increases as positions require advanced technical knowledge, or are seen as the expert resource for an area.
- * **Scope**: Refers to the impact the Information Systems program, project or task has on the unit/department, MAU or system.
- ** **Lead**: Provide day-to-day guidance, training and direction for staff in addition to other duties. Regularly assign and review work. Is fluent in assigned area of responsibility.
- ** **Supervise**: Hire, train, evaluate performance and initiate corrective action.

[2013 revisions include formatting for consistency and suggestions submitted by work team committee. Revisions were also posted for employee review and comment.]