

IT Sample Duties and Responsibilities Statements

BAND C– POSITION CONCEPT: SUBJECT MATTER EXPERT / FULL SUPERVISOR

Multi-user System Administration

Systems & Services Administration

- ❖ Oversees the economical and effective utilization of computing resources including personnel and equipment supporting the <e.g., Unix> platforms.
- ❖ Informs management of recurring or projected resource, capacity, and security problems and initiates and coordinates capacity planning and/or corrective action.
- ❖ Evaluates the performance of systems resources such as operating systems, servers and databases and implements change where required to improve performance on Unix platforms.
- ❖ Regularly monitors forums where <e.g., Unix>, & related issues are announced & discussed to stay informed of related problems & issues as they appear & are announced. Also passes on technical comments/suggestions that may be beneficial to colleagues.
- ❖ Recommends metrics, measurements, and benchmarks. Develops, implements, and manages quarterly reports to be used for general review, trends analysis, and capacity planning.

Management & Planning

- ❖ Reviews, approves, and directs the design and implementation of benchmarks, measurements, and metrics used for monitoring and improving practices related to administration of the Unix systems and services.
- ❖ Monitors related industry trends, technological developments, and emerging practices in the IT industry and higher education in anticipation of changing customer needs and expectations and makes recommendations to management and initiates projects.
- ❖ Assumes leadership for the implementation of new policies and directions and the application of new technologies to existing problems as they relate to the <e.g., Unix> systems and services.
- ❖ Coordinates hardware and software purchases and prepares recommendations to the Manager of Systems Engineering.
- ❖ Coordinates and helps prepare hardware installation plans with the Operations Manager and the Network Operations Manager.
- ❖ Helps prepare the annual Systems Engineering Goals and Objectives planning document.

Personnel Management

- ❖ Directs and reviews the work of all systems administrators and student assistants.
- ❖ Provides technical support and advice to systems administrators as necessary to resolve complex problems.
- ❖ Establishes the minimum qualifications and selection criteria, and makes the decision on filling all new and vacant systems administrator positions within the group.
- ❖ Adjusts duties and responsibilities of systems administrator positions within the group as necessary.
- ❖ Provides overall supervision of all <e.g., Unix> systems and services.
- ❖ Supervises and participates in on-going work and solves exceptional problems as necessary.

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Systems Analysis, Development, & Maintenance

- ◆ Formulates and defines overall system scope, design, and functionality.
- ◆ Gathers and analyzes complex user and institutional requirements and devises optimal solutions, including process reengineering, and translates system specifications into programming requirements.
- ◆ Establishes project team development procedures, methodologies, and guidelines.
- ◆ Serves on task forces to review user needs and evaluate existing systems. Interviews users regarding requirements, and analyzes current operations of systems to improve efficiency and accuracy.
- ◆ Develops plans for new systems and system enhancements and determines data security, backup, and recovery requirements.
- ◆ Designs software architecture for multi-platform, multi-user systems, and designs complex authentication and authorization systems for security.
- ◆ Integrates the different systems into a common informational system and coordinates the different needs of users into a common system design.
- ◆ Coordinates the development of detail design specifications such as narrative descriptions and system flowcharts, system inputs, processing logic, database/file definitions and structure, program specifications, system outputs, and system interfaces.
- ◆ Coordinates the development of databases and files to insure data integration and uniqueness of data between application systems.
- ◆ Develops unique software, which is unavailable in the marketplace; works in emerging technical environments and develops software involving complex data exchange among multiple programs that requires sophisticated program logic.
- ◆ Develops programming for individual administration projects.
- ◆ Develops programming standards to insure efficiency and consistency between programs, such as common modules to eliminate programming duplication.
- ◆ Determines programming requirements to interface enhancements to existing systems and reviews program design with assigned programmers.
- ◆ Develops software test procedures; designs system test; coordinates system and parallel testing; evaluates test results and determines whether program(s) can be considered operational; and performs software quality assurance testing.
- ◆ Prepares system implementation plan and determines major tasks that need to be completed, such as file/database conversions, load system tables, and create new files/databases.
- ◆ Coordinate scheduling of tasks and task-responsibility for technical staff and fiscal users.
- ◆ Installs new systems.
- ◆ Plans and conducts training for users; and coordinates the development of user manuals and training materials.
- ◆ Monitors and reviews system performance and user problems to determine system changes or enhancements; bug fixing; and fine-tunes the system.
- ◆ Implements controls to eliminate or minimize production mistakes.
- ◆ Coordinates the identification and resolution of production-related problems with System Services.
- ◆ Develops policies and procedures for the production unit in order to conform to System

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Services' standards.

- ◆ Analyzes impact of any anticipated hardware and software changes by System Services upon the MIS production unit.
- ◆ Provides technical consulting assistance to users; monitors and tunes software performance; performs software trouble-shooting.

Database Management and Administration

Database Administration

- ❖ Recommends metrics, measurements, and benchmarks. Develops, implements, and manages quarterly reports to be used for general review, trends analysis, and capacity planning.
- ❖ Informs management of recurring or projected resource, capacity, and security problems and initiates and coordinates capacity planning and/or corrective action.

Personnel Management

- ❖ Directs and reviews the work of all System Services database administrators and student assistants.
- ❖ Provides database design and administration advice to database administrators as necessary to resolve complex problems.
- ❖ Establishes the minimum qualifications and selection criteria, and makes the decision on filling all new and vacant Database Administration positions within the group.
- ❖ Adjusts duties and responsibilities of Database Administration positions within the group as necessary.
- ❖ Provides overall supervision of all administrative database environments.
- ❖ Recommends and schedules staff for training as required to ensure Systems Engineering maintains the skill sets necessary to efficiently and effectively manage the computer systems and associated applications, databases, and operating systems.
- ❖ Supervises and participates in on-going work and solves exceptional problems as necessary.

Networking

- ◆ Designs, plans & oversees the implementation of voice, data, & video communication cable and hardware, e.g., switches, routers, gateway or functional servers, to support requirements of the scope and scale consistent with campus or systemwide networks.
- ◆ Customizes design, installation and processes to account for unique customer requirements within the context of overall ITS and industry standards and conventions.
- ◆ Troubleshoots and performs corrective measures to resolve or avoid problems with voice, data or video networks within a range of environments across the University's statewide locations, and including operational international links.
- ◆ Works with senior IT peers or customer personnel, including executive management, in other departments or campus operations, external vendors, service providers or institutions, to collect requirements, complete projects, or resolve problems.
- ◆ Monitors network performance with appropriate hardware and software tools such as <insert specific tools here as appropriate>.
- ◆ Participates in the establishment and enforcement of security procedures to mitigate or

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- isolate the impact of network intrusions, attacks or other incidents from University resources.
- ◆ Creates, modifies or updates network, process or customer documentation, including establishing standard procedures that may be followed by IT professionals.
 - ◆ Coordinates large and complex projects or tasks that may include integrating the work of other IT professional staff, student technicians, contractors and suppliers.
 - ◆ Coordinates the notification of planned or unplanned outages working with both University and external organizations, such as <insert examples of organizations as appropriate>.
 - ◆ Manages large and complex projects, e.g., campus or multi-location network implementation, to include the supervision or coordination of peers, other professional staff, contractors, vendors, and student technicians.
 - ◆ Conducts site surveys and collects customer requirements related to complex or unique network design, implementation and problem resolution efforts.
 - ◆ Designs and implements network interconnection and integration based on customer, carrier and backbone network requirements.
 - ◆ Provides advice & guidance to IT peers & subordinates regarding complex network design, monitoring, maintenance and implementation, consistent with the general principles followed on University campus networks & generally accepted industry best practices.
 - ◆ Coordinates and integrates the efforts of other IT professional staff, including contractors, for efforts of varying size and complexity, including operational services by carriers and long-term contract service providers.
 - ◆ Provides recommendations and critical review of network or network service design, maintenance and implementation, including operational considerations, based on customer requirements, operational experience, and technical knowledge.
 - ◆ Initiates projects or work tasks based on customer requirements or as a situation may dictate to ensure availability and reliability of customer services.
 - ◆ Provides advice and guidance regarding network services to non-technical administrators and program managers, including program executives.
 - ◆ Based on program and technical requirements, evaluates and recommends appropriate hardware, software and services solutions.
 - ◆ Participates as a lead or active member representing the University in multi-jurisdictional projects of a complex and leading-edge technology nature.
 - ◆ Represents the University in both internal and external venues as a senior technical and/or subject matter expert.

Professional Development

- ◆ Keeps abreast of latest developments and techniques by perusing technical journals and periodicals.
- ◆ Investigates techniques and strategies utilized by other installations, especially higher education institutions, by participating in various professional organizations.
- ◆ Regularly monitors relevant forums where job related issues are announced and discussed, stays informed of related problems/issues as they appear & are announced; passes on technical comments & suggestions that may be beneficial to colleagues.
- ◆ Updates technical skills by attending seminars, classes, and industry conferences.
- ◆ Keeps abreast of trends in Oracle applications development and change-management practices and tools.