**CLASS FUNCTIONS:**

The majority of duties performed in this IT Broadband class include installing, maintaining, and modifying operating systems, database management systems, utilities, and related software. Other key duties include ensuring the availability, integrity, and reliability of assigned systems. Positions in this IT Broadband class are primarily responsible for large-scale operating systems and database management systems that typically serve the entire campus or large multi-unit departments. Positions in this IT Broadband class typically do not write applications software as a majority function.

Positions in this IT Broadband class will exist only in a central computing department or large administrative departments or large college units that have responsibility for their own internal operating systems or database management systems and where the operating system(s) or database management systems are sufficiently complex in terms of technical support and administration.

Within this IT Broadband class a full continuum of position complexity and competency from entry level to expert is represented. Within this IT Broadband class there will be positions of varying levels of technical complexity based on departmental need. Positions may also function as working supervisors with a full range of permanent supervisory responsibilities or may act as team or project leads. Positions may direct or supervise positions in this class or in other classes.

**TYPICAL DUTIES:**

The following are typical activities of positions in the Operating Systems IT Broadband classification. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this IT Broadband class has the majority of its ongoing work assignment in one or more of the following functions:

Ensure operating systems software is properly installed, tested, and tuned to maximize operating efficiency. Develop and implement plans for fully integrated systems, including operating systems, network systems, database systems and applications. Develop plans, schedules, and requirements for the installation and maintenance of new and/or revised software. Install, configure, and tune operating systems software for optimal performance. Integrate operating systems with other systems. Evaluate and recommend hardware and system software procurement. Assess the impact of new software on existing systems and users and develop modification plans as needed. Plan and implement upgrades and modifications to systems configuration to improve utilization based on analysis of application and production requirements. Plan system capacity and develop expansion plans. Allocate and organize data storage. Write and develop efficient software and code for operating systems.

Develop system utility programs and procedures to enhance operations, applications, and general system usage. Document operations procedures and installation methodologies and modifications. Evaluate level of systems operations and recommend measures to improve overall performance. Conduct analytical studies of system processing time and resource capacity, measuring system
performance against predetermined or standard benchmarks (e.g., operating time, error rates, and types). Determine system compatibility and performance, and impact of integration with new systems or upgrades. Perform analysis, testing, and/or simulation of equipment and software configurations. Research and identify systems expansions to meet anticipated future workload. Monitor and maintain operating and related systems to ensure minimal interruption of production systems and to maintain system availability. Diagnose and resolve operating systems failures. Develop and execute test schemes and diagnostic procedures. Work with maintenance vendor to develop and implement solutions specific to the campus needs. Provide technical support to computer operations and applications programming staff to ensure availability of production and on-line systems. Analyze application failures and work with computer operations and applications programming staff to develop solutions. Provide guidelines for applications development structure and security. Develop, implement and execute disaster recovery plans. Develop rules for system restoration. Evaluate the adequacy of controls and security measures. Provide procedures training and support. Assist in resolving production problems.

QUALIFICATIONS GUIDE:

Minimum qualifications for the Operating Systems Administrator IT Broadband: Bachelor’s degree in Computer Science, Information Technology, Computer Engineering, or related degree and three (3) years of experience; or an Associate’s degree with five (5) years of experience; or a combination of relevant education and seven (7) years of experience.

Individuals in this class will typically possess knowledge and/or applied skills and abilities in internal operations system technology, computer operations and hardware, systems analysis, systems level programming in a distributed networked environment, job control and production procedures, network operating system and architecture, client-server technologies, and database design. Depending on departmental needs and the specific work assignment, supervisory experience or advanced project management, systems analysis and design, programming, and/or database design and management experience may be required.

Specific qualifications including knowledge, skills, required programming language(s), abilities and education will differ from position to position as work assignments vary.

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