Position Summary: Describe below the primary purpose and function of this job

Function as a senior engineer/architect; assess technology trends, issues and define technical solutions to meet University technology needs. Ensure the stability, integrity, and efficient operation of the in-house information systems that support core university functions. This is achieved by developing, monitoring, maintaining, supporting, and optimizing software and associated hardware and operating systems. Provide functional and empirical analysis related to the design, development, and implementation of systems, including hardware utility software, development software, and diagnostic software. Provide system integration and security plans and implementation.

Key Roles & Responsibilities: List up to 6 key roles and responsibilities of this job.

1. Collaborate with functional counterparts to design and develop configurations, complex workflows, and system integration procedures. Document deployed systems and their integration points. Create test plans and perform regression testing and white box testing as modules are integrated into the end systems.

2. Formulate and define specifications for operating software programming applications or modify/maintain existing applications using engineering releases and utilities from the manufacturer.

3. Participate in the initial configuration and ongoing enhancements to the operating system's application architecture; assist with application upgrades; application tuning; support for data conversion processes; development of interfaces; assistance with performance and load testing; and support of the application security environment.

4. Design, code, test, debug, and document programs. Participate in the development of test strategies, devices and systems. Design and develop software to automate, monitor, test, deploy, and support systems. Perform regular tests of the high availability, disaster recovery, security and backup processes. Manage the staging environment used for final pre-deployment testing and verification.

5. Work with upper management and technical leads to identify technology gaps and architect solutions. Provide ongoing technical assistance to customers regarding applications and participate in upgrades and system enhancement projects. May assist other systems programmers to effectively utilize the systems developed.

6. Implement disaster recovery procedures, and ensure that systems meet high availability standards.

Expertise: Describe the requirement for knowledge and expertise about the subject area as well as how various parts of the University work together to achieve objectives. Explain the degree of understanding required of the industry and university environment.

As a senior staff member, incumbent is required to have an advanced understanding of his/her discipline including all required certifications as well as an advanced understanding of the business environment of a large university system. Incumbent must demonstrate an in-depth understanding of the University system, its policies, and its operating procedures. Incumbent must have demonstrated project management skills and the ability to work within a matrixed environment if necessary. Incumbent is expected to maintain currency of knowledge with respect to relevant state-of-the-art technology, equipment, and/or systems.

Incumbent should have advanced knowledge of computer sciences including but not limited to computer and network architecture, advanced systems analysis and software development in a client/server; system administration; TCP/IP networking; relational database structured query language (SQL); object oriented design; and multiple programming languages. Incumbent should be comfortable working with various operating systems and hardware solutions, non-vendor specific and open source. Incumbent must also have the ability to determine computer problems and coordinate hardware and/or software solutions; plan, implement, test, and troubleshoot system software; install, test, and maintain operating software and hardware; document work in progress and write technical instructions; and investigate and analyze information and draw conclusions.
Problem Solving: Describe the nature and complexity of the problems this position encounters on a recurring basis. Include information regarding the level of innovation required, if any, and include mention of environmental factors that may add to the complexity of resolving issues.

Incumbent will address complex problems and will use experience and judgment in creating solutions. Incumbent seeks assistance when significant deviations are proposed, or when unprecedented problems arise. Incumbent develops approaches to problem-solving and anticipates/mitigates potential issues.

Nature & Area of Impact: To what degree does this job affect the University (i.e., through interactions with faculty or students, making decisions, defining or setting strategy, etc.)? What is the breadth of the impact that this job has, either positive or negative (i.e., affects own team, department, function, business unit, entire university, etc.)?

Impact is felt within the team/department for which the incumbent works and within multiple, coordinating departments. Work quality, decision-making and long-term project management can affect the productivity of students, faculty and/or staff. Impact of errors is substantial and usually university-wide though mostly short-lived.

Interactions / Interpersonal Skills: Describe the nature and level of interactions this job has with others, both internally and externally. Explain any specific interpersonal skills necessary to successfully perform this role (i.e., negotiation skills, represents business at external events or to governmental bodies, etc.).

Interactions are with fellow team members and coordinating team members, but the incumbent will also have interactions with assigned student, faculty, or staff clients. Incumbent works with and may manage external vendors and service providers. Incumbent should possess superior verbal and written communication skills to convey technical guidance and information to users and to provide excellent customer service. Incumbent will train and provide guidance to more junior staff members and provide management with input into performance evaluations. Incumbent may provide guidance to management on critical technology issues. Incumbent is recognized as an technical authority within the University.

Distinguishing Characteristics

This is the senior or lead level for the discipline. Incumbent possesses all requirements and skills for Level 3 and has achieved proficiency in the typical tasks assigned to Level 3.

- Skills: Distinguished from Level 3 skills in that the Level 4 incumbent has fully developed and regularly applies his/her advanced technical skills.
- Level of Work: Distinguished from Level 3 work by highly complex and strategically significant activities. Assignments at Level 4 are usually long-term and the incumbent has significant latitude to devise the approach and method to performing the assignment.
- Supervision: Distinguished from Level 3 by the complexity and duration of assignments. Level 4 assignments are typically multi-faceted, may be cross-discipline and require significant coordination and planning by the incumbent. Level 4 incumbents regularly perform long-term and non-routine assignments with only general supervisory intervention. Also distinguished from Level 3 in that the incumbent serves as a resource to Level 1, 2 and 3 incumbents on complex problems. Level 4 incumbents will often train Level 1, 2 and 3 incumbents on work processes and policies and assist management with developing their technical skills. Level 4 has input into hiring decisions and staff performance assessments, but does not directly supervise.
- Interactions: Distinguished from Level 3 in that the Level 4 incumbent regularly works beyond his/her own team and often externally. The Level 4 incumbent regularly works with related teams, client groups, management and vendors and interactions may include influencing others.
- Focus: Distinguished from Level 3 in that the Level 4 incumbent regularly works toward specific team goals and client goals, and assists in establishing department processes and standards.

Job Requirements And Qualifications: Indicate the minimum and preferred education and experience for this job and any licenses and certifications required.

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<th>Minimum Education: Bachelor's degree or equivalent experience in Computer Science, MIS, Computer Engineering or related discipline.</th>
<th>Preferred Education: Master's degree in Computer Science, MIS, Computer Engineering or related discipline.</th>
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<tr>
<td>Minimum Experience: 5-7 years</td>
<td>Preferred Experience: 7-10 years</td>
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Required Licenses/Certifications: