

Career Path – IT Senior Principal, Consulting and Architect
Last updated: September 22, 2010

JCC Title	Qualifications	Grade	FLSA	JCC Number	Job summary (all job qualifications and responsibilities are cumulative in nature)
Senior Principal 3 jobs to include: Systems / Software Engineering; Network Design Engineering and Systems Engineering (only used in centralized Computing Services and on a limited basis in large colleges)	Master's degree in Computer Science, Information Technology or a related technical field or the equivalent combination of training and experience. 7 or more years experience; broad experience in a variety of technical environments including various platforms with a strong emphasis on large-scale distributed systems management; evidence of professional distinction through delivered software products, and/or a similar achievement; detailed knowledge of the computing industry as a whole, legacy systems and emerging technologies in particular; demonstrate experience deploying production systems in a complex and heterogeneous computing environment, knowledge of contemporary computing technologies. Preferred: Master's degree and 10 years experience including 5 years diverse experience and exposure in technical project leadership; experience in user interface design and user testing; detailed knowledge of top-level internet-based protocols and their applications, including client/server development; detailed knowledge of security, file systems, operating systems, directories, and related technologies associated with large-scale computing operations; experience with formal software engineering and development methodologies; experience with end-user services, experience with databases; experience in an academic setting; ability to do critical analysis of core software release and maintenance processes. Prefer a candidate that has either written, presented, served or chaired in a professional, academic or research capacity.	66	Exempt	3457 – Senior Principal Systems/Software Engineer Other JCCs with separate JCC content are: 3453 Senior Principal Systems Engineer 3449 – Senior Principal Network Design Engineer	The Senior Principal Engineer (SPE) leads in the planning, coordination, and review of a domain of staff and work products associated with the development and operational engineering of the university's core computing systems. The incumbent will be a key contributor to the technical and architectural leadership and planning for the department. NOTE: These three JCCs represent technical disciplines in System/Software Engineering, Database Administration, Systems Engineering and Network Design Engineering,
IT Consulting Engineer (only used in centralized Computing Services)	Master's degree or equivalent and 10 or more years experience in a programming/development environment; broad experience in a variety of technical environments including various platforms with a strong emphasis on large-scale distributed systems management; evidence of professional distinction through publications, delivered software products, and/or a similar achievement; detailed knowledge of the computing industry as a whole and emerging technologies in particular; demonstrated experience deploying production systems in a	67	Exempt	3458	Leads in the planning, coordination, and review of staff and work products associated with the development and operational engineering of the universities core enterprise computing systems. The incumbent will be a key contributor to the technical and architectural leadership for the department. NOTE: Incumbent is a recognized leader in more than one technical/functional area. Technical areas include Systems/Software Engineering, Network Engineering, and Systems Engineering. Functional areas include Disaster Recovery, IT Security and Business Continuity.

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Cont. IT Consulting Engineer (only used in centralized Computing Services)	complex and heterogeneous computing environment, knowledge of contemporary computing technologies. Has done one or more of the following: written, presented, served or chaired in a professional, academic or research capacity. Preferred: Master's degree and 12 years experience including 7 years diverse experience and exposure in technical project leadership; experience in user interface design and user testing; detailed knowledge of top-level internet-based protocols and their applications, including client/server development; detailed knowledge of security, file systems, operating systems, directories, and related technologies associated with large-scale computing operations; experience with formal software engineering and development methodologies; experience with end-user services, experience with databases; experience in an academic setting; ability to do critical analysis of core software release and maintenance processes. Diverse industry, instructional or enterprise experience.	67	Exempt	3458	
Senior IT Consulting Engineering (only used in centralized Computing Services)	Master's degree or equivalent and 13 or more years of broad experience in a variety of large-scale distributed systems environments; evidence of professional distinction through publications, delivered software products, and/or similar achievement; detailed knowledge of the computing industry as a whole and emerging technologies in particular. The ITSCA is expected to have broad theoretical and operational knowledge in many areas of computing: networking, operations, security, customer requirements and software development, but be especially strong in operating systems, database technology, and middleware services. Demonstrated effectiveness in tracking the development of standards and participating in their creation and promotion with experience writing, presenting, serving or chairing in a professional or academic capacity. Preferred: Master's degree and 15 years of diverse industry, institutional or enterprise experience and exposure including five years of direct architectural experience in academic environments and within computing organizations.	69	Exempt	3459	Responsible for representing the perspective and interests of divisions/schools and central computing in support of the development, description, maintenance and communication of the university's enterprise computing architecture. Provides long term guidance on a broad range of important technical issues, bringing external perspectives and internal sensibilities to the decision-making processes. In addition, the Information Technology Senior Consulting Engineer may be called upon to investigate selected experimental technologies, guide other staff in integration of new technologies and methods, and occasionally represent or assist directors or other executives in administrative and representational duties. May participate as a member of an industry wide standards based initiative working group (e.g. IETF or Internet2).

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Cont. Senior IT Consulting Engineer (only used in centralized Computing Services)	Experience with operational, theoretical, standards-based and open source endeavors. Awareness of international computing standards and customs.	69	Exempt	3459	
Head Architect IT (only used in centralized Computing Services)	<p>Master's degree or equivalent and 15 or more years of related experience, including in depth experience in particular scientific or engineering applications. Broad experience in large-scale distributed systems environments; evidence of professional distinction through publications, delivered software products, and/or similar achievement; detailed knowledge of the computing industry as a whole and emerging technologies in particular. The Head Architect has broad theoretical and operational knowledge in many areas of computing: networking, operations, security, customer requirements and software development, with keen awareness of integrative technologies and process. Demonstrated effectiveness in tracking the development of standards and participating in their creation and promotion with experience writing, presenting, chairing in a professional or academic capacity.</p> <p>Preferred: Ph.D. in related technical field. Significant diverse industry, institutional or enterprise experience and exposure in an academic setting or in a team or matrixed research environment as well as additional supervisory and executive management experience. Extensive architectural work in areas such as middleware, authentication, and authorization systems, networks, security devices and strategies, and Internet protocol suites. Experience with designs of databases and data warehouses. Experience as an educator.</p>	70	Exempt	3460	Nationally recognized technical leader within and across the academic environment responsible for providing a leadership role in the accomplishment of the tactical and strategic efforts related to complex research, and technical projects across the enterprise. Along with project managers and other team members, shares in problem formulation and procedural determinations. The Head Architect is required to deal with unique and unusual problems which require the development of novel approaches, techniques and solutions. Principal contributor in developing and documenting models, architectures, and approaches, may collaborator in writing scientific or professional papers. Frequently presents findings and opinions to current or potential sponsors and at national or international conferences. May serve as chair or co-chair of industry-wide working groups (e.g. IETF or Internet2)