McMaster University

Job Description
(For Positions in CAW Local 555, Unit 1)

Job descriptions do not include every duty that an individual in a position performs. They are intended to be representative and characteristic of the duties required and the level of work performed. Depending upon the size of the department or unit and its functional activities, incumbents who fall into this category may perform all of the duties listed below or, in the case of large departments or units, may be assigned to designated specialized functions.

JD #:	**JD00671**	Pay Grade:	**12**
JD Title:	**Lead Architect**	JD FTE Hours:	**35**
Job Family:	**IT**		

General Description

The Lead Architect acts as a primary technical and consulting resource to University Technology Services and various University departments and units with respect to the information technology architecture, planning, and implementation of information technology systems. Supports the University's academic and administration departments by acting in a functional capacity in all phases of the Project Life Cycle for medium to large projects. Continuously gains an understanding of the University's operations and processes and how systems are used in support of those operations. Provides supervision to a team of Architects and Systems Integration Specialists. Develops information technology architecture standards and best practices for use across the University.

Representative Duties & Responsibilities

- Manage work assignments of internal staff and schedule and monitor adherence to procedures, protocols, and standards.
- Act as an on-site project manager responsible for managing projects from inception to completion.
- Plan and establish project framework and identify project milestones to ensure the project is completed according to project specifications and within specified timelines.
- Design, develop, establish, and evaluate technical specifications for a variety of highly complex University systems.
- Complete feasibility studies and cost benefit analyses and translate technical architecture into business value terms.
- Provide ongoing technical direction to Architects and Systems Integration Specialists within the team and periodically to other technical staff assigned to relevant projects.
- Coach and mentor junior staff in order to ensure a highly motivated and technically competent team.
- Evaluate work product to ensure adherence to established functional and operational specifications.
- Accountable for the clarification, rationalization and documentation of project requests.
- Approve production migrations according to project involvement.
- Develop and lead information technology architecture training.
- Develop and manage information technology architecture policies, procedures and best practices and communicate to all staff.
- Participate in the development of capital project charters and cost justifications.
- Responsible for integration and release management of information technology architecture solutions.
- Facilitate large group information technology architecture development planning sessions.
- Ensure appropriate information technology subject matter expert participation in information technology architecture projects.
- Utilize the appropriate control tools to coordinate projects according to Project Management Office methodologies.
- Develop success criteria and risk assessments for projects and changes.
- Develop, implement, and document best practices to align with departmental and University strategies and processes.
- Work independently with users to define concepts.
- Drive and challenge business units on their assumptions of how they will successfully execute their information technology architecture plans.
- Collaborate with developers and subject matter experts to establish the technical vision and analyze tradeoffs between usability and performance needs.
- Critically evaluate information gathered from multiple sources, reconcile conflicts, decompose high-level information into details, abstract up from low-level information to a general understanding, and distinguish user requests from the

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Representative Duties & Responsibilities

underlying true needs.

- Conduct gap analyses.
- Ensure that projects meet specified functionality and technical requirements.
- Perform advanced levels of analysis, problem solving and research skills to formulate information technology architecture solutions to complex business needs.
- Work with project stakeholders to understand project scope and create test documents.
- Manage all phases of technical functional testing including, but not limited to, system, integration, acceptance, regression, and performance.
- Document system functionality, particularly related to new enhancements.
- Develop and maintain information technology process flow, methodology, and control documentation.
- Assist with the development of project proposals and estimates.
- Elicit requirements using interviews, document analysis, requirement workshops, surveys, site visits, business process descriptions, use cases, scenarios, business analysis, and task and workflow analysis.
- Analyze information needs and functional requirements and deliver architecture artifacts such as technology roadmaps, technical architecture, design, system integration, test plans and test cases.
- Take ownership of architectural issues by identifying underlying problems, analyzing potential solutions and implementing system resolutions, including workarounds.
- Provide Level III post implementation support to users regarding technical issues.
- Work with the development team to determine technical approaches and technical risks for project testing.
- Develop requirement specifications according to standard templates, using natural language.
- Identify and manage defects identified during all phases of a project.
- Review test cases created by testing team members to ensure that the test cases adequately define the business processes.
- Resolve architectural problems in the test, production implementation, and post-implementation phases in coordination with other technical and business groups.
- Review systems, processes, and information and provide recommendations to supervisor.
- Serve as the conduit between the Project Management Office and technical teams through which requirements flow.
- Liaise between the application, technology and support teams.
- Communicate project, issue, and system status to others.
- Communicate testing results to other stakeholders.
- Facilitate effective dialog between technical staff.
- Interact with and exchange information with colleagues.
- Prepare and review recommendations and other project initiation documents.
- Prepare and review end user and operations documentation, training materials, and timelines.
- Maintain information technology architecture process flow, methodology, and control documentation.
- Lead the Information Technology Architecture Review Board.
- Work with others to prioritize and schedule issues resolution.
- Plan, schedule, and monitor own work within short time horizons.
- Organize individual time, work and resources to accomplish objectives in the most effective and efficient way.
- Understand and use appropriate methods, tools, and applications to complete work tasks.
- Demonstrate a rational and organized approach to work and identify development opportunities.
- Absorb technical information when it is presented systematically and apply it effectively.
- Use measurement methods to monitor progress toward goal attainment, tenaciously working to meet or exceed those goals, while deriving satisfaction from the process of goal achievement and continuous improvement.
- Ensure that the internal and external customer perspective is a driving force behind decisions and activities.
- Follow service practices that meet customers' and University needs.
- Interact with others in a way that gives them confidence in one's intentions and those of the University.
- Work collaboratively with others to achieve departmental and institutional goals. Actively participate as a member of a team to move the team toward the completion of goals.
- Perform a range of varied work activities in a variety of structured environments.
- Successfully engage in multiple initiatives simultaneously.
- Apply and enforce department change control policies and procedures.
- Acquire and maintain a basic understanding of Business Intelligence and Data Warehousing principles.
- Read and understand complex Business Process Diagrams and develop basic (Level II) models.
- Read and understand a complex project plan and develop simple project plans.
- Remain current with relevant development and project methodologies.

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Representative Duties & Responsibilities

- Remain current with security policies and procedures and work with System Administrators to implement security changes.
- Remain current with the different levels of testing and develop simple use cases and test scripts.

Supervision

- Supervise and direct the activities of 1 to 4 continuing employees.

Qualifications

- Bachelor's degree in Computer Science, Business, or a related field of study.
- Requires 6 years of relevant experience, including one year of supervisory experience.

Effort

Physical Effort:

- A typical work day consists of greater than 3.5 hours of low physical effort for activities such as:
  - Intermittent periods of keyboarding to process documents, enter data into databases, and maintain accurate records.

- Elements of moderate physical effort are not a regular feature of this job.

- Elements of high physical effort are not a regular feature of this job.

Mental Effort:

- A typical work day occasionally requires routine mental effort for activities such as:
  - Collecting routine information, word processing routine documents such as correspondence and reports, and inputting data in databases and spreadsheets.

- A typical work day consists of up to 2 hours of moderate mental effort for activities such as:
  - Preparing and reviewing recommendations and other project initiation documents.
  - Analyzing and documenting relevant business processes.
  - Defining, documenting, and reviewing functional requirements.
  - Ensuring that projects meet specified functionality requirements.
  - Preparing and reviewing end user documentation, training materials, and timelines.
  - Providing Level III post implementation support to users regarding functional issues.

- A typical work day consists of greater than 3.5 hours of high mental effort for activities such as:
  - Developing success criteria and risk assessments for small to medium size projects and changes.
  - Designing functional specifications for a variety of highly complex University application systems.
  - Completing feasibility studies and cost benefit analyses and translating technical flow into business terms.
  - Establishing the technical vision and analyzing tradeoffs between usability and performance needs.
  - Identifying underlying problems, analyzing potential solutions and implementing system resolutions, including workarounds.
  - Critically evaluating information gathered from multiple sources, reconciling conflicts, decomposing high-level information into details, abstracting up from low-level information to a general understanding, and distinguishing user requests from the underlying true needs.
  - Conducting in-depth client interviews to determine business process flows and rules.
  - Performing the functional analysis for production support activities.
  - Conducting gap analyses.

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Working Conditions

Physical Environment:
- There are no adverse physical environment conditions inherent to the job.

Psychological Environment:
- Occasionally interacts with individuals who may be rude or upset.
- Frequently deals with multiple projects and simultaneous deadlines.

Health & Safety:
- Risk to the incumbent is no higher than for the general population.

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Job Description Rating Sheet

(For Positions in CAW Local 555, Unit 1)

JD #:	**JD00671**	Pay Grade:	**12**
JD Title:	**Lead Architect**	Total Points:	**729**
Job Family:	**IT**		

Factor	Subfactor	Level Rating	Points
Skill	1. Applied Reasoning and Analytical Skills	**6.0**	128
	2. Breadth of Knowledge	**2.0**	13
	3. Adaptation to Change/Updating of Learning	**2.5**	17
	4. Interpersonal Skill	**4.0**	54
	5. Education and Experience	**E4**	104
	6. Dexterity and Coordination	**2.0**	12
Effort	7. Physical Effort	**1.0**	3
	8. Mental Effort	**5.0**	100
Responsibility	9. Planning and Coordination	**5.0**	82
	10. Responsibility for Others	Full **4.0**	78
	11. Accountability for Decisions Actions Affecting People, Assets, and Information	**5.0**	120
Working Conditions	12. Physical Environment	**1.0**	3
	13. Psychological Environment	**2.0**	10
	14. Health and Safety	**1.0**	5

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