

JOB DESCRIPTION

Senior Engineer Software

ROLE TITLE	Senior Engineer Software
SECTION/DIVISION:	IT Information Systems, Digital Division
REPORTS TO:	Group Leader Development Services or Group Leader Integration and Automation or Group Leader Enterprise Identity
DIRECT REPORTS (FTE):	Nil
INDIRECT REPORTS (FTE):	Nil
PRIMARY PURPOSE OF THE ROLE:	Provide expert and specialist software development lifecycle (SDLC) services including systems analysis, sizing and scoping, skill requirements, software design, development, testing and defect management, maintenance and release/deployment. Working across a variety of platforms and technologies, provide specialist technical advice, solutions and services that ensures in-house developed software and externally supplied packages are functional, stable and integrated; operate efficiently and effectively; are sustainable, resilient, secure, available and agile to meet current and evolving organisation and user needs, and contemporary standards. The position provides specialist support and troubleshooting of developed software solutions. Client focus, excellent service delivery, and an operational focus with tactical and strategic awareness, are all critical to success in this role.
ACCOUNTABILITIES:	Programming/software development, PROG: Level 5 Takes technical responsibility across all stages and iterations of software development. Plans and drives software construction activities. Adopts and adapts appropriate software development methods, tools and techniques. Measures and monitors applications of project/team standards for software construction, including software security. Contributes to the development of organisational policies, standards, and guidelines for software development. Software design, SWDN: Level 4 Designs complex software applications, components and modules. Uses appropriate modelling techniques following agreed software design standards, guidelines, patterns and methodology. Creates and communicates multiple design views to balance stakeholders' concerns and to satisfy functional and non-functional requirements. Identifies, evaluates and recommends alternative design options and trade-offs. Models, simulates or prototypes the behaviour of proposed software to enable approval by stakeholders, and effective construction of the software. Verifies software design by constructing and applying appropriate methods. Reviews, verifies and improves own designs against specifications. Leads reviews of others' designs.

Release and deployment, RELM: Level 4

Assesses and analyses release components for input to release scheduling.

Maintains and administers tools and methods for software delivery, deployment and configuration.

Maintains release processes and procedures.

Problem management, PBMG: Level 4

Initiates and monitors actions to investigate and resolve problems in systems, processes and services.

Determines problem fixes and remedies.

Collaborates with others to implement agreed remedies and preventative measures.

Supports analysis of patterns and trends to improve problem management processes.

Change control, CHMG: Level 4

Assesses, analyses, develops, documents and implements changes based on requests for change.

Ensures that operational processes are in place for effective change control.

Develops, configures and maintains tools to manage and report on the lifecycle of change requests.

Identifies problems and issues and recommend corrective actions.

Systems integration and build, SINT: Level 4

Provides technical expertise to enable the configuration of system components and equipment for systems testing.

Collaborates with technical teams to develop and agree system integration plans and report on progress. Defines complex/new integration builds. Ensures that integration test environments are correctly configured.

Designs, performs and reports results of tests of the integration build. Identifies and documents system integration components for recording in the configuration management system.

Recommends and implements improvements to processes and tools.

Specialist advice, TECH: Level 4

Provides detailed and specific advice regarding the application of their specialism to the organisation's planning and operations.

Actively maintains knowledge in one or more identifiable specialisms.

Recognises and identifies the boundaries of their own specialist knowledge.

Where appropriate, collaborates with other specialists to ensure advice given is appropriate to the organisation's needs.

KEY RELATIONSHIPS:Internal

Leaders, managers and staff (as clients)
IT Services Division staff
Project sponsors and managers
Enterprise Project Management Office

External

University and industry peers
Vendors, service providers, contractors, consultants, outsourcing organisations

QUALIFICATIONS AND EXPERIENCE:Essential

Tertiary level qualification in a relevant discipline or recognised qualification(s) appropriate to the role.
Considerable experience in a software development/solutions role using relevant technologies, and programming and scripting languages.
Proven experience in database design and development
Proven experience designing interactive human-centred user experiences
Proven experience analysing and translating user requirements into software and systems to achieve client-focused business solutions.
Proven experience in change and release management processes; and writing technical and functional documentation.
Experience in agile development.
Experience in change and release management best practice.
Experience with a range of relevant development tools, frameworks, and environments.

Preferred

Tertiary IT level qualification.
Proven experience providing software engineering services in a large or complex organisation.
Agile delivery experience including being the lead software Engineer on an agile project.
Experience in developing cost/resource estimates, technical specifications and systems design.
Proven ability to build and maintain strong working relationships and communicate at varying levels across a large organisation.
Experience in providing solutions for research, and teaching and learning environments.

TECHNICAL SKILLS AND KNOWLEDGE:Essential

Software development expertise covering the full software development life cycle (SDLC), including systems analysis, systems design, programming, testing and defect management, and release/deployment
Deep specialist knowledge in a specific area of software development
Understanding of software architecture and design issues, from both technical and end-user perspectives
In-depth knowledge of programming for diverse operating systems and platforms using development tools and methodologies, and software design and programming principles
In-depth knowledge of relational database development and management, programming tools and techniques
Advanced programming experience multiple programming languages

Preferred

Detailed experience across at least 5 of the SWEBOK knowledge areas.
Knowledge of current and emerging programming and scripting languages and technology.
Proven understanding of software architecture and design issues, from both technical and user experience perspectives
Knowledge of current development security practices and technology
Good knowledge of OWASP (Open Web Application Security Project)

SPECIAL REQUIREMENTS:	May work across one or more portfolios. Contribute as part of a network of IT Information Systems staff to provide suitable coverage during periods of leave, peak period activities and to cater for university and customer requirements. Maintain high levels of discretion and confidentiality of information and data. Support of scheduled after hours work will be required on occasion. Provide service and support to the University of Otago satellite campuses as and when required. Some travel may be required. At the University, we are required to be compliant with the Public Records Act 2005 and Privacy Act 2020. Staff are expected to participate in available training to understand these requirements and effectively manage information accordingly.
DIRECT BUDGET ACCOUNTABILITY:	Nil
MĀORI STRATEGIC FRAMEWORK:	Act in a manner consistent with the principles and implications, as well as the University's commitment to the Treaty as articulated in the Māori Strategic Framework.
PACIFIC STRATEGIC FRAMEWORK:	Act in a manner consistent with the strategies and goals contained in the University's Pacific Strategic Framework, role-modelling and promoting Pacific values, equity and diversity principles and cultural safety practices.
HEALTH AND SAFETY:	Act and work in a manner compliant with current health and safety at work legislation and University procedures, frameworks and guidelines. Role model safe behaviour and practices, share the responsibility to prevent harm and contribute to a safe campus and work environment, including raising workplace health and safety concerns for self, students, visitors and other staff.
SUSTAINABILITY:	Act in a manner consistent with the University's sustainability commitments; role-modelling sustainable practices, with a particular emphasis on minimising the environmental impact of day-to-day activities.

SKILLS FRAMEWORK FOR THE INFORMATION AGE (SFIA)

Senior Engineer Software

Role Type: Engineer

SFIA Levels of responsibility

Autonomy	4	Influence	4	Complexity	5	Business Skills	5	Knowledge	4
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SFIA Skills Profile

Category	Subcategory	Skill	Code	L1	L2	L3	L4	L5	L6	L7
Development and implementation	Systems development	Programming/software development	PROG							
Development and implementation	Systems development	Software design	SWDN							
Delivery and operation	Technology management	Release and deployment	RELM							
Delivery and operation	Service management	Problem management	PBMG							
Delivery and operation	Service management	Change control	CHMG							
Development and implementation	Systems development	Systems integration and build	SINT							
Strategy and architecture	Advice and guidance	Specialist advice	TECH							

<https://help.sfia.nz/hc/en-nz/sections/4407230514201-Levels-of-responsibility>

<https://sfia-online.org/en/sfia-8/sfia-views/full-framework-view?path=/glance>