JOB DESCRIPTION

Engineer Software

ROLE TITLE	Engineer Software
SECTION/DIVISION:	Information Systems, Digital Division
REPORTS TO:	Group Leader Development Services *or* Group Leader Integration and Automation
DIRECT REPORTS (FTE):	Nil
INDIRECT REPORTS (FTE):	Nil
PRIMARY PURPOSE OF THE ROLE:	Provide software development lifecycle (SDLC) services including software analysis, design, development, testing and defect management, maintenance and release/deployment. Working across a variety of platforms and technologies the role provides software solutions developed in-house and externally supplied packages, ensuring they 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. This role will provide specialist third level support, advice and troubleshooting in support of custom software solutions. A client focused orientation providing excellent service delivery is critical to success in this role.
ACCOUNTABILITIES:	**Programming/software development, PROG: Level 4** Designs, codes, verifies, tests, documents, amends and refactors complex programs/scripts and integration software services. Contributes to the selection of the software development methods, tools and techniques. Applies agreed standards and tools to achieve well-engineered outcomes. Participates in reviews of own work and leads reviews of colleagues' work. **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 3
Uses approved tools and techniques for specific deployment activities.

Administers the recording of activities, logging of results and documents technical activities undertaken.

Problem management, PBMG: Level 3
Investigates problems in systems, processes and services.

Assists with the implementation of agreed remedies and preventative measures.

Change control, CHMG: Level 3
Develops, documents and implements changes based on requests for change.

Applies change control procedures.

Applies tools, techniques and processes to manage and report on change requests.

Systems integration and build, SINT: Level 3
Defines the software modules needed for an integration build and produces a build definition for each generation of the software.

Accepts completed software modules, ensuring that they meet defined criteria. Produces software builds from software source code for loading onto target hardware.

Configures the hardware and software environment as required by the system being integrated. Produces integration test specifications, conducts tests and records and reports on outcomes.

Diagnoses faults and records and reports on the results of tests. Produces system integration reports.

KEY RELATIONSHIPS:

Internal
Clients of development services
IT Services Division staff
Project sponsors and project managers
University staff, students and community

External
University and industry peers
Vendors, service providers, and contractors

QUALIFICATIONS AND EXPERIENCE:

Essential
Tertiary qualification or equivalent body of knowledge appropriate to the role.
Proven experience in a software development/solutions role using relevant technologies, and programming and scripting languages.
Experience in database design and development
Experience designing interactive software.
Experience in developing and implementing test plans for software.
Experience with a range of relevant development tools, frameworks, and environments
Experience/involvement in software development projects.

Preferred
Tertiary level IT qualification.
Proven work experience as a Software Engineer or Software Developer role in a medium to large organisation.
Experience analysing and translating user requirements into computer-based programs and systems to achieve business, client-focused solutions.
Experience in change and release management processes; and writing technical and functional documentation.

TECHNICAL SKILLS AND KNOWLEDGE:	Essential Knowledge of the full software development life cycle (SDLC), including systems analysis, systems design, development, testing and defect management, maintenance and release/deployment Knowledge and understanding of a range of development tools and methodologies; software design and programming principles. Knowledge of at least one programming language. Familiarity with a variety of operating systems and platforms. Preferred Detailed experience across at least 3 of the SWEBOK knowledge areas. Understanding of software architecture and design issues, from both technical and end-user perspectives Understanding 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. 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. Maintain high levels of discretion and confidentially of information and data. 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.
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)

Engineer Software

Role Type: Engineer

SFIA Levels of responsibility

Autonomy	4	Influence	4	Complexity	4	Business Skills	4	Knowledge	4

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							

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