The University of Waikato
Te Whare Wānanga o Waikato

POSITION DESCRIPTION

Technical Officer in Mechanical Engineering

Reports to:	Technical Team Leader - MEMS
Division:	STEM - School of Engineering Technical
Tenure:	Permanent
Location:	Hamilton campus
Date:	May 2026

Vision

Ko te tangata

A research-intensive university providing a globally connected, innovative and inclusive studenty experience in an environment characterised by a commitment to diversity, respect for Indigenous knowledge, and high levels of community engagement.

Values

Ko te mana o Te Whare Wānanga o Waikato ka herea ki tō tātou:
- Tū ngātahi me te Māori
- Mahi pono
- Whakanui i ngā huarahi hou
- Whakarewa i te hiringa i te mahara

The University of Waikato places a high value on:
- Partnership with Māori
- Acting with integrity
- Celebrating diversity
- Promoting creativity

1. GENERAL

The Division of STEM comprises three Schools (Computing and Mathematical Sciences, Engineering and Science) and several research units, including the Artificial Intelligence Institute and commercial/equipment units.

The School of Engineering (Te Kura Mata- Ao) offers accredited BE(Hons) degree programmes in Chemical & Processing Engineering, Civil Engineering, Electrical and Electronic Engineering, Environmental Engineering, Materials & Process Engineering, Mechatronic Engineering, Mechanical Engineering, and a graduate diploma in Engineering Management. The School of

Engineering also offers both taught and research Masters as well as PhDs. Research and development strengths are in construction, infrastructure and structural engineering, energy, water, automation, robotics, sensing, electrical power systems, biomedical engineering, thermomechanical analysis and advanced materials.

2. POSITION PURPOSE

To provide high quality technical support for teaching programmes, external contracts, research and commercial activities associated with Mechanical Engineering in the School.

3. ACCOUNTABILITY

The Technical Officer is responsible to the Technical Team Leader of the School of Engineering.

4. FUNCTIONAL RELATIONSHIPS

Internal: Dean of School of Engineering
Technical Manager
Technical Team Leader
Academic staff/ Programme leaders
Technical staff
Postgraduate/graduate students
Undergraduate students
Services staff
Administrative staff

External: Contractors and Suppliers - sourcing, ordering and maintaining equipment, consumables and other items as required
Clients - commercial requests, collaborative projects and equipment use

5. KEY RESPONSIBILITIES

Technical and Laboratory Support

- Support design-for-manufacture, rapid prototyping, and process development from concept through to final design.
- Apply mechanical engineering principles to design and manufacture components from metal, wood, and composite materials, using 3D printing, CAD tools, and modern manufacturing techniques.
- Provide instruction, supervision, and hands-on support to staff and students in operating mechanical equipment, fabrication tools, mechanical testing apparatus, and associated software as required.
- Assist academic staff with the design and planning of teaching activities and materials requiring technical input.
- Develop and document standard and customised methods for equipment operation and process use.
- Demonstrate technical equipment, techniques, and software where required.
- Participate in and help plan School, Division, and University promotional activities, including outreach programmes, marketing, and events.

Laboratory Management

- Supervise staff and students in the day-to-day operation of the lab.
- Ensure laboratory facilities are maintained to a high standard, ensuring functionality, availability, and compliance with regulatory requirements.
- Undertake or arrange scheduled maintenance, repairs, calibration, and testing of equipment to ensure optimal performance and reliability.
- Maintain accurate records of equipment usage, performance, and maintenance activities.
- Ensure consumables and materials are purchased and stocked appropriately to support teaching and research activities.
- Liaise with lab users to coordinate the appropriate storage and disposal of equipment, materials, and hazardous laboratory waste in line with established guidelines.
- Maintain and apply an up-to-date working knowledge of equipment, software, and relevant technologies.
- Manage the ongoing operational requirements of assigned facilities as directed.

Team Contribution and Continuous Improvement

- Work effectively as a member of the School of Engineering to support other team members and provide support and/or coverage of functions.
- Work collaboratively to encourage transparency across activities, open sharing of knowledge, and the building of positive relationships to support a high-performance culture.
- Actively contribute to the ongoing development and improvement of systems and processes.
- Work with other team members on projects.
- Support a positive culture and morale.

Health, Safety and Compliance

- Act as Laboratory Safety Supervisor for designated lab and project spaces, ensuring compliance with university health and safety policies.
- Ensure safe storage, handling, and disposal of substances in compliance with hazardous substance regulations, while maintaining accurate records
- Provide induction and training for lab users and contractors to communicate health & safety and operational procedures.
- Compile and maintain standard operating procedures (SOPs) and hazard registers for equipment and processes.
- Maintain a safe and healthy work environment for all users, fostering strong safety awareness and best practice.
- Contribute to the development and implementation of School and University occupational health and safety (OHS) initiatives and guidelines.

Other Duties

- Any other duties as required that are consistent with the position held, other than in exceptional circumstances such as rehabilitation after injury or sickness.

NOTE: Staff have an annual Objectives, Development and Reflection (ODR) meeting with their manager.

6. PERFORMANCE STANDARDS

The Technical Officer will be performing satisfactorily when:

- Technical solutions for design, prototyping, and process development are delivered effectively, supporting teaching, research, and operational needs.
- Instruction, supervision, and support for staff and students are timely, accurate, and promote effective use of equipment, software, and techniques.
- Teaching and research activities benefit from well-planned and expertly implemented technical input.
- Documentation of methods, processes, and techniques is clear, complete, and compliant with School and University standards.
- Laboratory facilities, equipment, consumables, and materials are maintained to a high standard and are reliably available when needed.
- Equipment is correctly used, calibrated, and maintained, ensuring safe and efficient operations.
- Records of equipment usage, performance, and maintenance are accurate, up-to-date, and accessible.
- Collaboration with colleagues ensures coordinated, aligned, and efficient service delivery, supporting continuous improvement and team performance.
- Projects, initiatives, and operational requirements are actively supported and delivered in a timely and professional manner.
- Safe work practices are consistently applied, with substances, equipment, and processes handled, stored, and disposed of according to policies, standards, and legal obligations.
- SOPs, hazard registers, and health and safety procedures are complete, accurate, and communicated effectively to all lab users and contractors.
- Contributes proactively to process improvements, innovation, and operational efficiency within the laboratory and technical services.

PERSON SPECIFICATION

EDUCATIONAL QUALIFICATIONS

Essential

- Trade qualification, or relevant experience in Mechanical Engineering.

Preferred

- Bachelor's degree in a relevant discipline.

SKILLS, KNOWLEDGE and EXPERIENCE

Essential

- Excellent interpersonal and communication skills, with the ability to learn quickly, work effectively in a team, and provide quick, efficient support to undergraduate students, postgraduate students, and industry projects.
- Strong organisational and inventory management skills.
- Proven experience with Computer Aided Design (CAD) software packages
- Engineering workshop skills and basic electronic & micro controller skills.
- Strong commitment to, and working knowledge of, Health and Safety obligations, requirements, and laboratory maintenance.
- Proven skills in troubleshooting and problem solving.
- Full New Zealand driver's licence.

Preferred

- Industry experience with knowledge of modern design and manufacturing processes in the engineering sector.
- Prototyping - laser cutting, 3d printing with FDM, SLA, DLMS.
- Experience in general laboratory practice involving teaching and research.
- Understanding of safe handling and storage for laboratory-related hazardous materials, as well as machine guarding and workshop safety protocols.
- Workplace first aid certificate

PERSONAL QUALITIES

- Ability to work with a diverse group of people and to work as part of a team.
- Attention to detail.
- Mechanical aptitude.
- Willingness to learn and develop technical skills as directed.
- Passion for helping students succeed in their academic studies and knowledge, as the next generation of engineers.
- Reliable, conscientious, adaptable and a positive attitude.
- Commitment to a culture of openness, flexibility and co-operation to achieve excellence in academic programmes, research and service.
- Commitment to equal opportunity and to the University's partnership with Māori as intended by the Treaty of Waitangi.