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POSITION DESCRIPTION

Technical Officer/Senior Technical Officer

Position Level	6/7
Faculty/Division	Engineering
Position Number	00198589
Original document creation	June 2024

Position Summary

The Technical Officer / Senior Technical Officer contributes to the output of the School through the development, maintenance and efficient day-to-day management of teaching and research equipment, infrastructure and services in the Mechanical and Manufacturing Engineering Laboratories. The Technical Officer / Senior Technical Officer will identify research and teaching requirements, facilitate commissioning and maintenance of specialised equipment, and manage user access and training across these two areas.

The Technical Officer / Senior Technical Officer plays an active role in compliance with WHS requirements, initiating and managing WHS activities and developing and implementing policies and procedures in collaboration with the HSE Advisor and Laboratory Manager.

The role of Technical Officer / Senior Technical Officer reports to the Laboratory Manager and has nil direct reports.

Accountabilities

Specific accountabilities for this role include:

LEVEL 6 (Technical Officer)

- Work with the Technical Staff Team to provide engineering support for the production of apparatus, devices, models and rigs, including manufacturing, constructing and assembling apparatus, devices, models or rigs using the appropriate manufacturing method.
- Independently manage the efficient day-to-day laboratory operations in designated MME laboratories including: authorising access to laboratories and equipment; coordinating, conducting and evaluating user training; and general user oversight of the laboratories, including

for the complex installation, maintenance, repairs, calibration, troubleshooting of School equipment and infrastructure.

- Provide technical advice and support for teaching and/or research in the laboratories, including concept design and integration into CAD drawings and support for the development of selected PhD and honours projects as required.
- In consultation with academic staff and/or other users, identify requirements in terms of equipment, infrastructure, services and training to help achieve desired lab-based teaching and/or research outcomes.
- Oversee the safe purchase, storage and disposal of chemicals and materials within designated MME laboratories. This includes maintaining a working knowledge of Safety Data Sheets and basic chemical handling.
- Work collectively with the technical team across the School to contribute to a culture of continuous improvement, evaluating existing equipment, infrastructure, service delivery and training, as well as systems, procedures and protocols, to identify opportunities for improvement and implement change as approved by the Laboratory Manager.
- Implement and maintain safety systems within the laboratory environment to comply with University and statutory policies, guidelines and procedures in collaboration with the HSE Advisor and Faculty WHS Coordinator.
- Undertake other relevant duties in the School as directed by the Laboratory Manager consistent with the level of the position.
- Align with and actively demonstrate the UNSW Values in Action: Our Behaviours and the UNSW Code of Conduct.
- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health and safety of yourself or others.

Level 7 Senior Technical Officer (in addition to the above)

- Act with a higher degree of independence in the provision of support and advice to the users of the laboratories.
- Provide support for students and staff to analyse and identify requirements for the design and construction of apparatus, devices, models or rigs, which may be for individual projects, class demonstrations or experiments.
- Use specialised expertise to provide advice in areas such as mechatronics, engines, aerodynamics, vibration, fluids, lasers, refrigeration, energy systems, composite materials, manufacturing or advanced materials to provide high level technical support for teaching and research across the School and University.
- Manage allocated budget for general consumables and advise on costs for any relevant spending out of research funds.
- Consult with Academic staff members and Technical team to establish priorities and develop business cases to bid for unallocated funds from the School budget.

Skills and Experience

Level 6

- A relevant qualification with subsequent practical experience and/or an equivalent level of knowledge gained through any other combination of education, training or experience. A trade qualification in Engineering (fitting and machining Certificate III or IV) is highly desirable.
- Experience in CAD drawings using software such as Solidworks or equivalent is highly desirable.
- Proficient computing skills including word processing, spreadsheets and databases.
- Demonstrated experience implementing safety systems and initiatives, including training students and/or staff in safe working practices in a complex laboratory environment.
- Excellent communication and stakeholder engagement skills with a focus on understanding business requirements and being able to translate this into technical concepts and written technical documentation.
- Capability to manage purchasing of chemicals, equipment and other materials in compliance with statutory and University requirements.
- Demonstrated ability to manage competing deadlines and the demonstrated ability to work both independently and as part of a wider technical team for the benefit of the School.
- Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training.

Level 7 (in addition to the above)

- Extensive experience managing complex laboratory or workshop equipment used in the MME Laboratories.
- Knowledge and experience in at least one or more areas of the following areas of mechanical or manufacturing engineering: mechatronics, engines, combustion, aerodynamics, vibration, fluids, lasers, refrigeration, energy systems, composite materials, manufacturing or advanced materials.
- Extensive knowledge of hazardous materials and dangerous goods (HMDG) and their safe management.
- Demonstrated experience in managing budgets, purchasing and assets or design/implementation of systems for teaching laboratories or research groups or equivalent.
- High level analytical and problem-solving skills, with a demonstrated ability to investigate and make informed decisions regarding complex issues.
- Experience driving a culture of continuous improvement, providing recommendations for new methodologies and solutions to improve laboratory systems and procedures.
- Proven experience developing and implementing safety systems in a laboratory context.

PROGRESSION STATEMENT

The incumbent will normally be expected to have reached the top step of level 6 prior to progression to level 7. Criteria for progression to level 7 will be based on satisfactory performance of all duties and accountabilities at level 6 and a demonstrated capacity to take on the duties and accountabilities of the position at level 7.

About this document

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role