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POSITION DESCRIPTION

Technical Officer

Faculty/Division	DVC-Research and Enterprise
Classification Level	Professional 5
Hours & Span (Category)	E - Technical Officer, Senior Technical Officer
Position number	ADMIN ONLY
Shiftwork status	NOT SHIFTWORKER
Allowances	N/A
On call arrangements	N/A
Original document creation	30 April 2024

Position Summary

The Electron Microscope Unit (EMU) is a central research and research support unit within the Mark Wainwright Analytical Centre (MWAC) at UNSW Sydney. The resources of the EMU are available to the entire UNSW Sydney community as well as industry and other external clients. These resources include instruments for the study of structure and composition of biological, chemical and physical materials as well as highly trained and experienced staff who provide technical and scientific support. The EMU is a founding node of Microscopy Australia, which is the peak body for nanostructural analysis in Australia.

The Technical Officer will be responsible for providing technical support and training to biological and cryo-users of the EMU to ensure that high quality data is acquired. The Technical Officer will be responsible for the day-to-day operation of transmission electron microscopes, scanning electron microscopes, and biological and soft-matter specimen preparation related to these techniques within a PC2 environment.

The Technical Officer reports to the Associate Director, Electron Microscope Unit and has nil direct reports.

Accountabilities

Specific accountabilities for this role include:

- Assist internal and external users in standard biological specimen preparation and soft materials sample preparation for transmission electron microscopy (TEM) and scanning electron microscopy (SEM).
- Direct and advise users in various specimen preparation techniques for TEM and SEM to solve problems that arise during sample preparation.

- Apply a thorough knowledge of a range of TEMs and SEMs to instruct EMU users in their correct operation.
- Support senior EMU staff in by performing TEM and SEM sample preparation and microscopy as required.
- Demonstrate the use of computer software directly related to the acquisition and storage of data to EMU users.
- Support the operation of the MWAC PC2 laboratory including assisting with filling liquid nitrogen vessels, disposal of residues, preparation of media and solutions as required.
- Ensure all equipment, instruments and glassware washing, autoclaving, disinfecting, and cleaning is conducted to a high standard and in accordance with procedures and guidelines.
- Carry out general laboratory housekeeping and back support services to researchers and laboratories.
- Maintain currency of documentation of methods and procedures such as standard operating procedures.
- Develop new operational manuals and other laboratory documentation as required.
- Participate in the delivery of short courses or other training activities, as required.
- Contribute to other EMU, MWAC and Microscopy Australia initiatives as required.
- 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 psychosocial or physical health and safety of yourself or others.

Skills and Experience

- Relevant tertiary qualification in biological science, or an equivalent combination of education, training and experience with biological microscopy and/or imaging of soft materials.
- Demonstrated experience in transmission electron microscopy (TEM) and/or scanning electron microscopy (SEM) in a relevant biological field.
- Experience with ultramicrotomy or histological sectioning or soft materials sample preparation techniques are highly desirable. Previous experience in PC2 laboratory is highly desirable.
- Demonstrated capacity in sample preparation techniques to a diverse range of specimen types.
- Demonstrated ability to operate multiple TEMs and SEMs to image a variety of specimen types.
- Demonstrated aptitude in using scientific software packages and the ability to learn new systems.
- Excellent written and verbal communication skills, with a high level of attention to detail and the ability to liaise effectively with a range of stakeholders.
- Demonstrated ability to work collaboratively and productively within a team.
- An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.

- Knowledge of health & safety (psychosocial and physical) responsibilities and commitment to attending relevant health and safety training.

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.