



Position Description

College/Division:	ANU College of Physical & Mathematical Sciences
Faculty/School/Centre:	
Department/Unit:	Centre for Advanced Microscopy (CAM)
Position Title:	Technical Officer (Microprobe)
Classification:	ANU Officer Grade 7 (Technical)
Position No:	TBA
Responsible to:	Director, CAM
Number of positions that report to this role:	0
Delegation(s) Assigned:	N/A

PURPOSE STATEMENT:

The Centre for Advanced Microscopy (CAM) is a central facility providing high-end technologies and expert knowledge to the research students and staff of the ANU. With this cost-effective method of accessing state of the art infrastructure, CAM assists in making the ANU a world class research intensive university. CAM is the ACT node of the Australian Microscopy and Microanalysis Research Facility (AMMRF), a collaborative network of Microscopy Centres in Australia. CAM has recently moved into a newly refurbished purpose-built facility and currently houses 3 TEMs and 4 SEMs and has recently installed a JEOL JXA8530F Field Emission Gun electronprobe microanalyser (EPMA).

The Technical Officer will provide (1) expert advice and training on the EPMA and other high-end instruments and techniques to researchers and students from ANU, other universities and industry users, (ii) formal training workshops on a regular basis, (iii) lab and equipment management including maintenance of instrumentation.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

Within the broad framework of the delivery of microscopy services and research at CAM, the position will provide an expert in the operation and maintenance of the JEOL JXA8530F electronprobe microanalyser (EPMA).

The Technical Officer reports directly to the Centre Manager, CAM. He/she will have extensive experience in the use of EPMA's and will provide efficient technical support and research advice to academic and professional staff and students from a wide range of disciplines across the ANU and external users of CAM.

Role Statement:

Under the broad direction of the Centre Manager, CAM, but with a degree of autonomy, the Technical Officer will:

1. Provide new and existing users (ANU staff, students and external clients) hands-on training in the proper use of the JEOL JXA8530F EPMA, this includes instruction in the principles and practice of high quality quantitative analysis using both WDS and EDS techniques, setting up the instrument for users and assisting and training in its routine use.
2. Manage and maintain the JEOL JXA8530F EPMA. This includes monitoring instrument performance and maintaining spectrometer and/or standard calibrations if required; monitoring the quality and validity of user data; maintaining continuous and detailed records of instrument maintenance.
3. Work with academic staff and students in the development, evaluation, documentation and publication of new analytical protocols and techniques using the JEOL JXA8530F EPMA. Keep abreast of new and emerging technologies and implement plans to deliver the best techniques coupled with the best training to CAM users.
4. Undertake routine maintenance, identify instrument problems and arrange or carry out repairs and replacement of parts in the JEOL JXA8530F lab, as appropriate. Organise regular maintenance by instrument manufacturers when required or scheduled.
5. Develop and deliver training courses in microprobe analysis and relevant sample preparation techniques, and assist with other courses when appropriate.
6. Contribute to training and use of other instruments in CAM as directed (including SEM, TEM and relevant ancillary equipment), and assist with the maintenance and management of other instruments.
7. In consultation with the Director and the Operations Manager, take a lead role in the guidance of users including coaching and mentoring to build their operational and technical capability in JEOL JXA8530F EPMA research. Be responsible for the development and maintenance of the training and user documentation.
8. Develop and implement marketing strategies to ensure that stakeholders are aware of existing and emerging capabilities available within CAM
9. Contribute to the maintenance and documentation of Workplace Health and Safety (WH&S) guidelines and procedures and ensure procedures are followed in the relevant labs.
10. Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity.

11. Undertake other duties as required consistent with the classification level of the position and in line with the principles of multi-skilling.

It is expected that at ANU Officer 7 occupants will have a deep understanding, and an independent application, of the technical methods and procedures used, and a consequent increase in the complexity of the functions performed.

SELECTION CRITERIA:

1. A degree (Bachelor of Science minimum, MS or PhD preferred) with at least 3 year's subsequent relevant experience, or an equivalent combination of relevant experience and/or education/training.
2. Demonstrated extensive experience in the use of an electron microprobe and other related techniques in earth and/or materials science research.
3. Demonstrated experience in the running and management of equipment and infrastructure, including monitoring and maintenance of specialised equipment, preferably within a research support facility/higher education environment or similar complex environment.
4. Demonstrated understanding of mineral chemistry and of the physical and chemical principles of quantitative analysis and micro-imaging of materials by electron microprobe.
5. Enthusiasm and capacity for development of innovative analytical and imaging techniques capitalising on the enhanced capabilities of a modern Field Emission Gun electronprobe microanalyser.
6. Demonstrated experience in organising and assisting in the training of staff and students participating in research activities on a complex instrument in a safe laboratory environment.
7. Proven ability to work both independently and as part of an interdisciplinary work environment with demonstrated capabilities for multi-tasking, attention to detail and ability to prioritise competing deadlines.
8. Demonstrated excellence in written and verbal English communication including maintaining accurate records, asset registries, lab protocols, safety procedures, as well as liaising with academic and professional staff and students.
9. Demonstrated high-level understanding of equal opportunity principles and occupational health and safety, and a commitment to the application of these policies in a university context.

Delegate Signature:		Date:	
Printed Name:		Uni ID:	

References:

[General Staff Classification Descriptors](#)



Australian
National
University

Pre-Employment Work Environment Report

Position Details

College/Div/Centre	CPMS	Dept/School/Section	CAM
Position Title	Microprobe Technician	Classification	ANU07 (Technical)
Position No.		Reference No.	

In accordance with the Occupational Health and Safety Act 1991 the University has a duty of care to provide a safe workplace for all staff.

- This form must be completed by the supervisor of the advertised position and forwarded with the job requisition to Appointments and Promotions Branch, Human Resources Division. Without this form jobs cannot be advertised.
- This form is used to advise potential applicants of work environment issues prior to application.
- Once an applicant has been selected for the position consideration should be given to their inclusion on the University's Health Surveillance Program where appropriate – see . http://info.anu.edu.au/hr/OHS/_Health_Surveillance_Program/index.asp Enrolment on relevant OHS training courses should also be arranged – see http://info.anu.edu.au/hr/Training_and_Development/OHS_Training/index.asp
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see 'Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	laboratory work	<input checked="" type="checkbox"/>	<input type="checkbox"/>
lifting, manual handling	<input type="checkbox"/>	<input checked="" type="checkbox"/>	work at heights	<input type="checkbox"/>	<input type="checkbox"/>
repetitive manual tasks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	work in confined spaces	<input type="checkbox"/>	<input type="checkbox"/>
catering / food preparation	<input type="checkbox"/>	<input type="checkbox"/>	noise / vibration	<input type="checkbox"/>	<input type="checkbox"/>
fieldwork & travel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	electricity	<input type="checkbox"/>	<input type="checkbox"/>
driving a vehicle	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
NON-IONIZING RADIATION			IONIZING RADIATION		
solar	<input type="checkbox"/>	<input type="checkbox"/>	gamma, x-rays	<input type="checkbox"/>	<input type="checkbox"/>
ultraviolet	<input type="checkbox"/>	<input type="checkbox"/>	beta particles	<input type="checkbox"/>	<input type="checkbox"/>
infra red	<input type="checkbox"/>	<input type="checkbox"/>	nuclear particles	<input type="checkbox"/>	<input type="checkbox"/>
laser	<input type="checkbox"/>	<input type="checkbox"/>			
radio frequency	<input type="checkbox"/>	<input type="checkbox"/>			
CHEMICALS			BIOLOGICAL MATERIALS		
hazardous substances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	microbiological materials	<input type="checkbox"/>	<input type="checkbox"/>
allergens	<input type="checkbox"/>	<input type="checkbox"/>	potential biological allergens	<input type="checkbox"/>	<input type="checkbox"/>
cytotoxics	<input type="checkbox"/>	<input type="checkbox"/>	laboratory animals or insects	<input type="checkbox"/>	<input type="checkbox"/>
mutagens/teratogens/ carcinogens	<input type="checkbox"/>	<input type="checkbox"/>	clinical specimens, including blood	<input type="checkbox"/>	<input type="checkbox"/>
pesticides / herbicides	<input type="checkbox"/>	<input type="checkbox"/>	genetically-manipulated specimens	<input type="checkbox"/>	<input type="checkbox"/>
			immunisations	<input type="checkbox"/>	<input type="checkbox"/>

OTHER POTENTIAL HAZARDS (please specify):

Supervisor's Signature:		Print Name:	Melanie Rug	Date:	
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