



NOTES

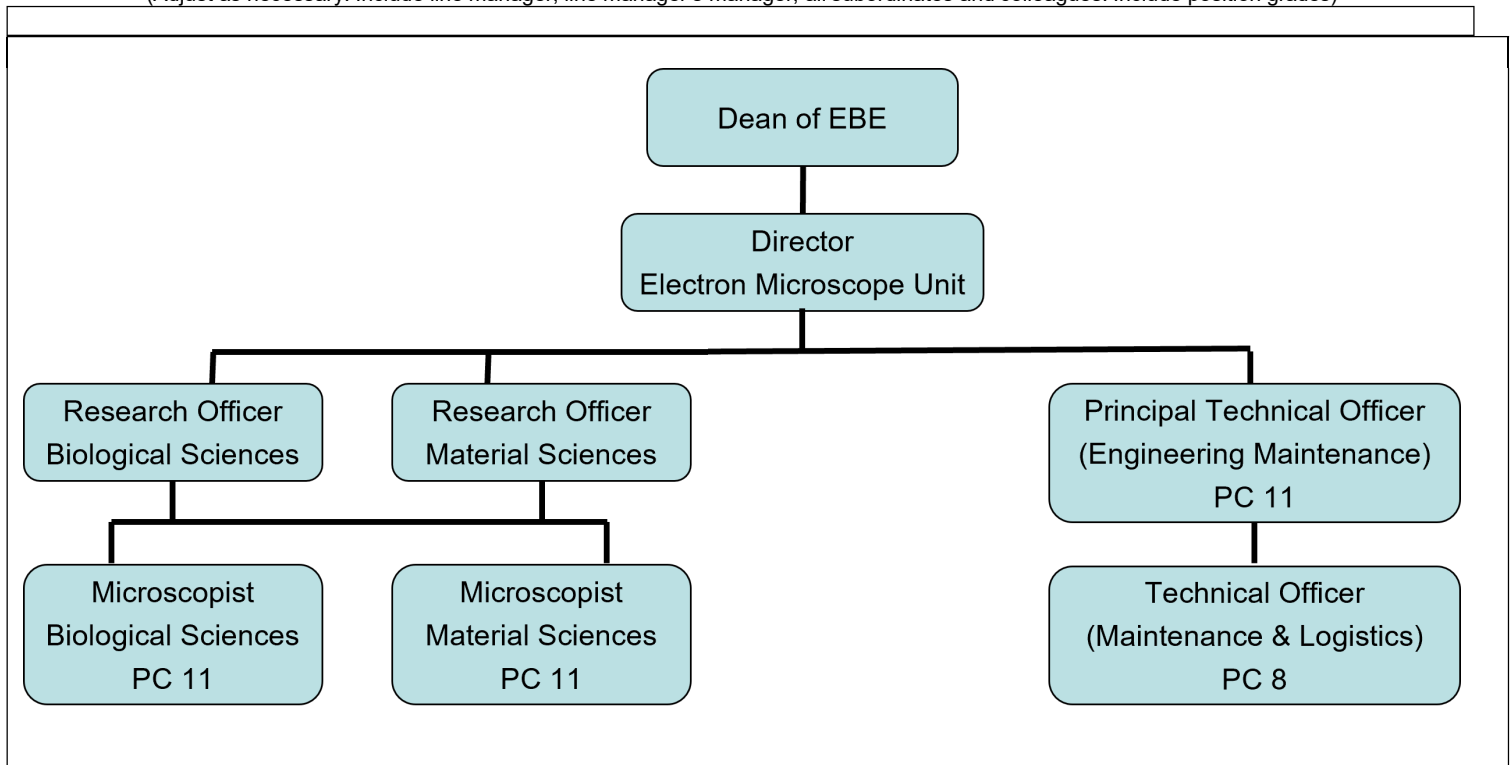
- Forms must be downloaded from the UCT website: <http://forms.uct.ac.za/forms.htm>
- This form serves as a template for the writing of position descriptions.
- A copy of this form is kept by the line manager and the position holder.

POSITION DETAILS

Position title	Director of the Electron Microscope Unit		
Job title (HR Practitioner to provide)			
Position grade (if known)		Date last graded (if known)	
Academic faculty / PASS department	EBE		
Academic department / PASS unit	Electron Microscope Unit (EMU)		
Division / section			
Date of compilation			

ORGANOGRAM

(Adjust as necessary. Include line manager, line manager's manager, all subordinates and colleagues. Include position grades)



PURPOSE

The EMU is a world-class facility serving the nanoscale imaging needs of both the physical and life sciences. The resources of the Unit include transmission and scanning electron microscopes, other related imaging tools, specialized preparative equipment and staff capable of operating and maintaining the equipment. The Director will lead, develop, maintain, market and manage the Unit in the interests of the users of the facility, primarily researchers from the University of Cape Town and their post-graduate students. The Director will report to the Chairperson of the Electron Microscope Unit Committee on issues relating to strategy and planning and to the Dean of the Faculty of Engineering on operational issues. Fifty percent of the Director's time will be spent on self-initiated research in imaging and analysis or a field that uses modern imaging techniques extensively. It is expected that the incumbent will be of professorial rank and will have an active, funded, research programme.

JOB CONTENT

Key Performance Areas (4 – 6)	% of time spent	Activities / Objectives / Tasks	Results / Outcomes	Competencies
<p>1. Lead and manage the activities and development of the EMU</p> <p>Maintain an awareness of the research needs of the users of the EMU and manage the Centre so as to optimally meet those needs.</p>	<p>35</p>	<ul style="list-style-type: none"> (a) Develop a strategy for the Unit in order to maintain it at the cutting edge. (b) Manage and lead the staff of the Unit (c) Raise funds for additional staff posts and promotions as required. (d) Ensure that the day to day operations of the Unit function efficiently (e) Ensure that the equipment is properly maintained and that it performs to the manufacturers specification. (f) Plan, motivate and raise funding for the maintenance and ultimately the disposal of existing equipment in consultation with University management and the user community. (g) Plan, motivate and raise funding for the upgrade and/or acquisition of equipment in consultation with the user community. (h) Plan, motivate and raise funding for any expansion of the physical footprint of the Unit in consultation with University management and the user community (i) Convene and chair a user committee comprising three representatives from each of the faculties of Science, Engineering and the Built Environment and Health Sciences and the research and scientific staff of the Unit. (j) Meet with UCT based research scientists involved in the physical, biological, medical and 	<ul style="list-style-type: none"> (a) Highly motivated, task oriented, helpful and efficient staff. (b) A staff complement that meets the needs of the University and the user community. (c) A Unit that can cost-effectively meet the imaging and analysis needs of the user community. (d) A record of such meetings. (e) A Unit that meets the needs of the user community effectively and provides access to modern electron microscopes and ancillary equipment . 	<ul style="list-style-type: none"> (a) Managerial and administrative skills (b) Technical knowledge of electron microscopes and associated equipment sufficient to be able to make informed decisions. (c) Ability to plan strategically within the university, national and international contexts (d) Ability to relate research in the user departments/centres to activities in the EMU

		engineering sciences and related research.		
2. Conduct research in an area that is closely related to nanoscale imaging	50	<ul style="list-style-type: none"> (a) Maintain an international research profile (b) Mentor and train researchers and postgraduate students (c) Raise funds for independent research, 	<ul style="list-style-type: none"> (a) 3 or more papers per year (b) 1-2 BSc(Hons) and one MSc or PhD student graduating per year (c) Sufficient funding to maintain an active research programme 	Ability to conduct and report on original research. Ability to teach, motivate and manage students. Ability to write fundable research grant applications.
3. Educate senior students and researchers in the application and use of advanced electron microscopy and other imaging and analysis techniques	10	<ul style="list-style-type: none"> (a) Identify potential imaging services that may be required and ensure the acquisition of equipment and training of staff. (b) Ensure that postgraduate students and staff receive to develop competency in the utilization of advanced electron microscopy techniques. Design and develop introductory and applied short courses in consultation with UCT departments/centres. (c) Present short courses to assist in developing the user community. (d) Prepare web-based teaching materials. 	<ul style="list-style-type: none"> (a) Senior students and researchers highly skilled in the application of advanced imaging and analysis techniques. (b) High quality research output (including ISI ranked journal papers) (c) Improvement in the skills of the user community. (d) Increased utilization of advanced methods in Imaging and Analysis. (e) Efficient teaching/learning that can be accessed all times. 	<ul style="list-style-type: none"> (a) Good communication skills. (b) A mature understanding of the application of imaging and analysis in all fields
4. Lead the Unit to ensure that it provides services to all relevant/significant imaging users Take ultimate accountability and responsibility for budgeting and cost recovery through the sale of services. Report on the activities and finances of the Unit	5	<ul style="list-style-type: none"> (a) Monitor the cost structure of activities within the Unit and identify effective points at which these costs can be recovered in consultation with the Unit staff (b) Financial planning, budgeting and reporting (c) Stakeholder reporting – internal and external (d) Ensure health and safety compliance (e) Ensure that an annual report is prepared and submitted to the Chairperson of the EMU Committee 	<ul style="list-style-type: none"> (a) A list of prices for different preparative and visualization activities and appropriate cost recovery (b) An annual report 	Detailed knowledge of operational costs of the Unit Ability to capture the essence of the Unit

MINIMUM REQUIREMENTS

Minimum qualifications	PhD in an area that makes extensive use of electron microscopy or closely related imaging technology.			
Minimum experience (type and years)	Substantial experience in the use of electron microscopy and other imaging and analysis techniques in research, as evidenced by a publication record. A track record that demonstrates leadership (both scientific and administrative), managerial skills and the ability to raise funds.			
Skills	Building interpersonal relationships / Building partnerships / Analytical thinking - Problem solving / Client-student service and support / Communication / University awareness / Facilitating change / Individual Leadership / People management / Resource management. Leadership / People Management and Development /Quality Assurance / Public Service and Social Responsibility / Financial management (planning and budgeting, revenue generation) / Teaching at BSc (Hons) level (Course structure, course materials and content, course delivery and management) / Research (research leadership, promotion of research culture, supervision of postgrad students, research administration) / Quality Assurance (external examiners, student feedback, governance, accreditation, HEQC QA) / Financial management (planning and budgeting, revenue generation) / Health and safety			
Knowledge	Scanning and Transmission electron microscopy, X-ray and electron crystallography, General knowledge of both materials and bioscience imaging and analysis applications and techniques, Specialist research level knowledge of an area of imaging and analysis			
Professional registration or license requirements	N/A			
Other requirements (If the position requires the handling of cash or finances, other requirements must include 'Honesty to handle cash or finances'.)	Credibility, Integrity, Honesty			
Competencies (Refer to UCT Competency Framework)	Competence	Level	Competence	Level
	Written communication	4	Strategic leadership	4
	Resource management	3	Resilience / tenacity	3
	Professional knowledge and skill	4	Initiating action / initiative	4
	Decision-making/ Judgement	3	Client / Student Service and Support	4

SCOPE OF RESPONSIBILITY

Functions responsible for	<ol style="list-style-type: none"> 1. Providing leadership at every level in the Unit 2. Establishing a system for the uninterrupted operation of the Unit in the interest of the users. 3. Motivating the acquisition of new instruments to meet the needs of the users 4. Raising funds for new instruments 5. Establishing a system for cost recovery 6. Specifying tasks for staff and preparing job descriptions for vacant posts 7. Communicating with the user community, assessing and meeting their needs. 8. Supervising the preparation of the annual report 9. Attend meetings of the EMU Committee 10. Convening meetings of the User Committee 11. All self initiated or assigned teaching and research
Amount and kind of supervision received	The Director is answerable to the EMU Committee, the dean of the Faculty of Engineering and the Built Environment and is expected to consult with the user community, otherwise the post is unsupervised and the incumbent acts on his/her own initiative
Amount and kind of supervision exercised	The Director must define the scope of tasks to be performed by the Unit staff. In general the staff perform their duties independently and with occasional support so monitoring of their activities is generally sufficient.
Decisions which can be made	All appropriate decisions relating to the affairs of the Unit within University policy

Decisions which must be referred	Decisions that are beyond the budget and scope of the Unit and that impinge on University or Faculty resources
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CONTACTS AND RELATIONSHIPS

Internal to UCT	Staff of the Centre, users of the Centre, collaborators within UCT, other departments at UCT, broader UCT community, University policy and decision-making bodies
External to UCT	Suppliers, funders, clients, collaborators outside UCT, government policy bodies, learned societies