



## NOTES

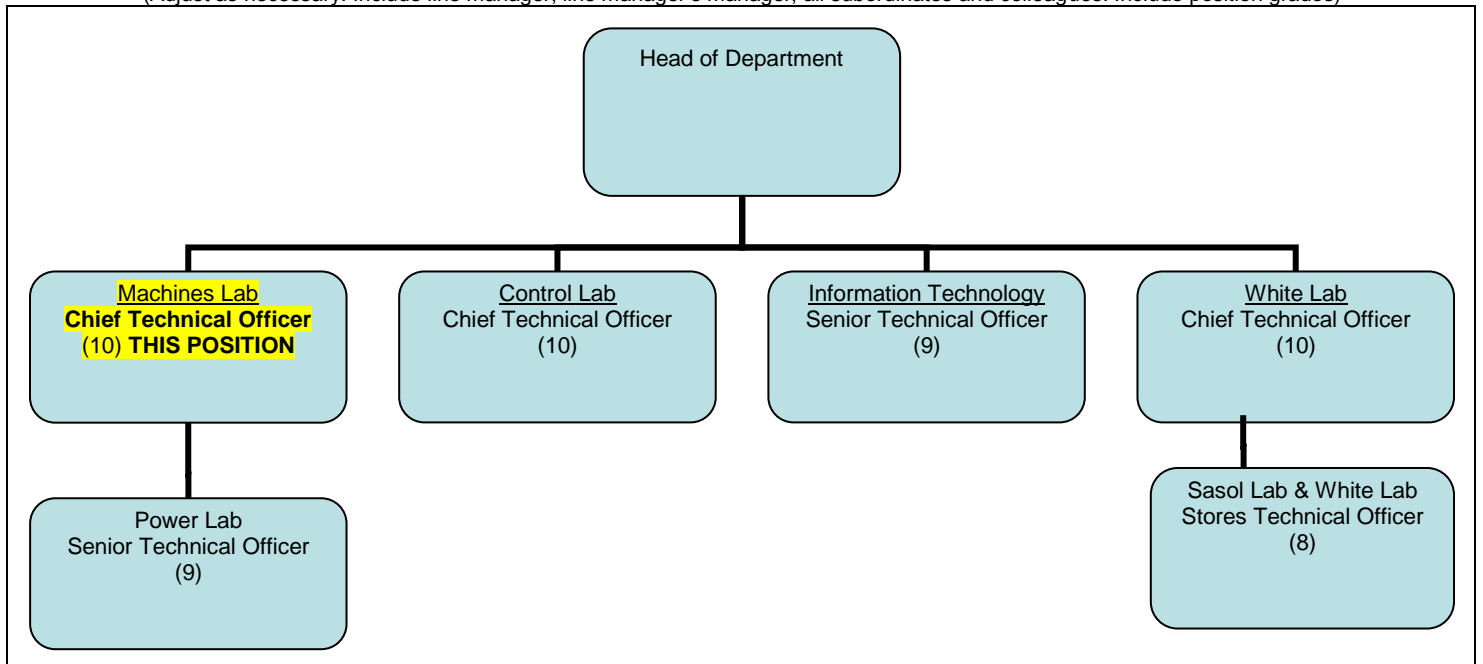
- Forms must be downloaded from the UCT website: <http://forms.uct.ac.za/forms.htm>
- This form serves as a template for the writing of position descriptions.
- A copy of this form is kept by the line manager and the position holder.

## POSITION DETAILS

Position title	Chief Technical Officer		
Job title (HR Practitioner to provide)			
Position grade (if known)	10	Date last graded (if known)	
Academic faculty / PASS department	Engineering & the Built Environment		
Academic department / PASS unit	Electrical Engineering		
Division / section			
Date of compilation	16 August 2017		

## ORGANOGRAM

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



## PURPOSE

The main purpose of this position is to maintain an efficient operation of the Machines, Power laboratory and workshop and to provide technical and teaching assistance and supervision to undergraduate students, postgraduate students and academic staff.

Manage the operations of the Machine and Power Labs, material and equipment sourcing and ordering, maintenance of workshop and laboratory equipment, training of subordinates on equipment usage, health and safety compliance.

In a changing environment, the specific tasks assigned may differ in detail, but the level of responsibility and overall nature of the work will remain the same.

**CONTENT**

<b>Key performance areas</b>		<b>% of time spent</b>	<b>Inputs</b> (Responsibilities / activities / processes/ methods used)	<b>Outputs</b> (Expected results)
1.	Machines and Power laboratories Management	25	<ul style="list-style-type: none"> <li>• Maintain equipment.</li> <li>• Set up and maintain procedures for equipment usage.</li> <li>• Operate a variety of machines, instruments or equipment in support of research and laboratory activities.</li> <li>• Carry out (or arrange for) the repair and maintenance of workshop/laboratory and related equipment and instrumentation.</li> <li>• Contribute to grant applications for laboratory equipment upgrades.</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment well maintained.</li> <li>• Procedures and manuals readily available.</li> <li>• Machining and laboratory equipment maintained in good working order.</li> </ul>
2.	Postgraduate and undergraduate training and supervision.	35	<ul style="list-style-type: none"> <li>• Participate in supervision and training of post-graduate and undergraduate students</li> <li>• Provide a discipline-specific research consulting service in support of various research projects (internal/external)</li> <li>• Provide training, set up procedures for use of equipment/instruments</li> <li>• Mentoring undergraduate students in the lab</li> <li>• Consult and supervise student experiments.</li> </ul>	<ul style="list-style-type: none"> <li>• Students achieve required results from experimental work.</li> <li>• Students gain solid fundamentals in Electrical Engineering.</li> <li>• Positive feedback from students and staff.</li> <li>• Complete operational requirements.</li> </ul>
3	Design & Development	10	<ul style="list-style-type: none"> <li>• Design, develop and implement equipment and devices as required by staff and students within the Department</li> </ul>	<ul style="list-style-type: none"> <li>• Devices/equipment developed within budget.</li> <li>• Complete operational requirements</li> </ul>
4.	Component and equipment store maintenance.	10	<ul style="list-style-type: none"> <li>• Students and staff have components and equipment for Power Engineering projects.</li> <li>• Data sheets, manuals and guidelines are available.</li> </ul>	<ul style="list-style-type: none"> <li>• Students are able to achieve practical results.</li> <li>• Equipment well maintained and calibrated.</li> </ul>

5.	Health and safety management	10	<ul style="list-style-type: none"> <li>• Ensure that the Machines and Power Laboratories and Workshop complies with all aspects of the Occupational Health and Safety Act (OHS) 85 of 1993.</li> <li>• Upgrade and maintain machinery to comply with health and safety standards (OHS).</li> <li>• Identify risks and advise on safe work practice.</li> <li>• Ensure risk assessments are done for all new work in the Machines and Power Labs.</li> <li>• Stopping those committing unsafe laboratory and workshop practices.</li> <li>• Safety induction and lab procedures for students working in the Machines and Power Laboratories.</li> <li>• Application of first aid when necessary.</li> </ul>	<ul style="list-style-type: none"> <li>• Students and academics operate in a safe manner in a safe working environment.</li> </ul>
6.	Resource management: People	10	<ul style="list-style-type: none"> <li>• Line Manager to Technical Officer in the Power Lab.</li> <li>• Line Manager and mentor to Graduate Intern Technicians and In-service Trainee Technicians</li> <li>• Oversee operations of Machines and Power Laboratories and Workshop.</li> <li>• Provide input into performance agreements.</li> <li>• Schedule staff leave.</li> <li>• Monitor operational activities.</li> <li>• Ensure afore-mentioned people and laboratories are adequately resourced.</li> </ul>	<ul style="list-style-type: none"> <li>• Students and Academics achieve required results.</li> <li>• All human resource functions relating to own staff are carried out timeously and in accordance with UCT HR policy, procedure and relevant legislation</li> <li>• Updated job descriptions</li> <li>• Staff are well trained and equipped to meet the performance standard expected</li> <li>• PDP's in place</li> <li>• Positive working relationships</li> <li>• Motivated staff</li> <li>• Procedures and manuals readily available.</li> </ul>

### MINIMUM REQUIREMENTS

Minimum qualifications	BTech or BSc(Eng) in Electrical Engineering			
Minimum experience (type and years)	5 years relevant experience in Electrical Machines, Drives and Power Electronics			
Skills	<ul style="list-style-type: none"> <li>• Experience in using electrical measurement and test equipment</li> <li>• Problem solving</li> </ul>			
Knowledge	Knowledge of Health and Safety Policies			
Professional registration or license requirements	None			
Other requirements	None			
Competencies (Refer to <a href="#">UCT Competency Framework</a> )	Competence	Level	Competence	Level
	Analytical thinking / Problem solving	2	Planning and organizing / work management	2
	Building interpersonal relationships	2	Safety Awareness	4
	Client/student service and support	2	University awareness	2
	Communication	2	Teamwork / collaboration	2
	Decision-making / Judgment	3	Initiating action / initiative	4
	Resource management	3	Professional knowledge and skill	4

### SCOPE OF RESPONSIBILITY

Functions responsible for	<ul style="list-style-type: none"> <li>• Maintain and manage the laboratory equipment and its associate infrastructure.</li> <li>• Offer technical advice, guidance and troubleshooting approaches to students and staff on technical matters pertaining to Electrical Machines, Drives and Power Electronics.</li> <li>• Setup and oversee all undergraduate experimental sessions in the Machines and Power Laboratories.</li> <li>• Assist with setup and supervision of the experimental work relating to the following projects in the Machines and Power Laboratories: postgraduate, final-year undergraduate and contract research projects.</li> <li>• Assist with the development of new measurement and test facilities for the Machines and Power Laboratories.</li> <li>• Ensure compliance of Machines and Power Laboratories and Workshop with Occupational Health and Safety Act.</li> </ul>
Amount and kind of supervision received	
Amount and kind of supervision exercised	<ul style="list-style-type: none"> <li>• Line Manager and supervisor to Technical Officer of Power Lab and Workshop.</li> <li>• Line Manager and supervisor to Graduate Intern Technicians and in-service Trainee Technicians.</li> </ul>
Decisions which can be made	Ordering of materials and supplies required for effective operation of Machines and Power Labs and Workshop
Decisions which must be referred	Mutual consultation with Academics on capex equipment for subsequent years.

### CONTACTS AND RELATIONSHIPS

Internal to UCT	
External to UCT	

### AGREED BY

	PRINT NAME	SIGNATURE	CONTACT NO.	DATE
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Position Holder				
Line Manager				
HOD				