HR191	**POSITION DESCRIPTION**	UNIVERSITY OF CAPE TOWN IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

NOTES

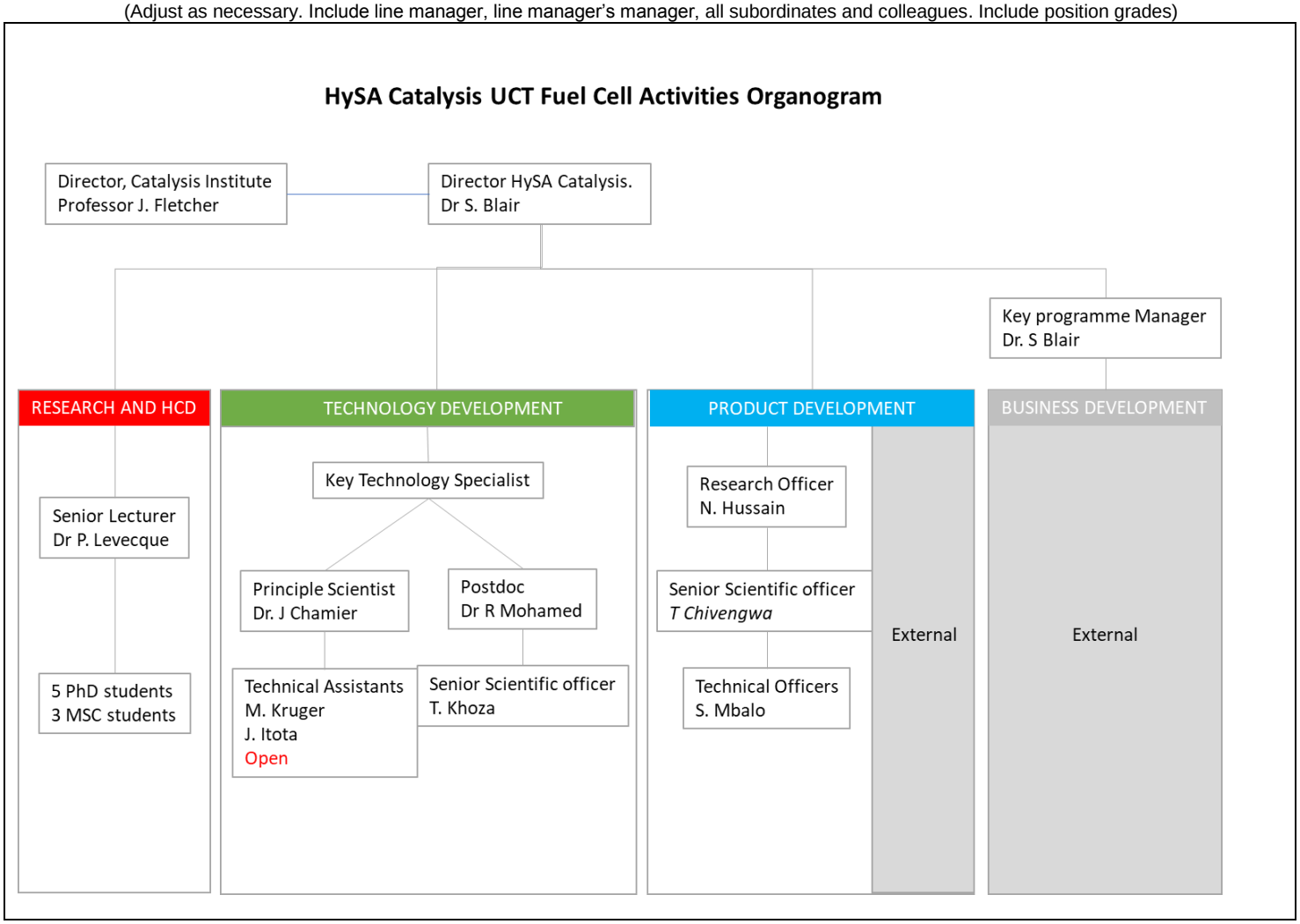
- Forms must be downloaded from the UCT website: http://forms.uct.ac.za/forms.htm
- This form serves as a template for the writing of position descriptions.
- A copy of this form is kept by the line manager and the position holder.

POSITION DETAILS

Position title	**TECHNICAL ASSISTANT**		
Job title (HR Practitioner to provide)	**TECHNICAL ASSISTANT**		
Position grade (if known)	**PC06**	Date last graded (if known)	
Academic faculty / PASS department	**EBE**		
Academic department / PASS unit	**CHEMICAL ENGINEERING**		
Division / section	**CATALYSIS INSTITUTE**		
Date of compilation	**20 September 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:

- Fabrication of membrane electrode assemblies (MEA) and MEA process development for HySA Catalysis technology development activities.
- Operate catalyst coating and MEA assembly fabrication equipment in HySA Catalysis laboratories
- Perform MEA in-situ fuel cell characterization activities namely cell assembly, MEA testing and post data processing
- Utilise additional characterization tools as required and carry out sample preparation and characterization.
- Provide laboratory and technical assistance to students and interns in MEA activities at HySA/Catalysis.

CONTENT

Key performance areas		% of time spent	Inputs (Responsibilities / activities / processes/ methods used)	Outputs (Expected results)
1	MEA fabrication	35	• Fabrication of membrane electrode assemblies (MEA) for academic and technology development purposes. • Perform physical specification and characterization of MEAs • Implement Novel MEA fabrication methods and processes for nanomaterials advances.	• MEAs made according to project specifications • Implement MEA fabrication methods for innovative material incorporation.
2	MEA testing	35	• Perform MEA in-situ fuel cell characterization activities A) cell assembly, B) fuel cell diagnostic measurements C) and post data processing. • Basic maintenance and cleaning of MEA testing stations. • Assist Laboratory manager, safety officer and safety rep in the management of the weekly lab clean ups and general Safety, Health and Environment (SHE) and housekeeping issues	• Standard operating of MEA fabrication equipment. • Accurate and up to date datalogging and record of test samples • MEA laboratory maintained according to approved process/ procedures • Compliance to health and safety legislation and regulations • Record of equipment status
3	Laboratory Assistance/Procurement & Training	20	• Assist with materials characterization of MEAs • Keep stock of Technology Development chemicals, consumables and materials • Assist in the training and demonstration of MEA fabrication and testing to intern and students	• Accurate and updated inventory list of technology development MEA materials maintained • Positive feedback from technical staff and students • Establishment of training protocol and resources • Required stock levels of all MEA materials are maintained
4	Communication	10	• Logging of all MEA fabrication and testing procedures • Logging of all results • Assist with the collation of Quarterly reports on MEA progress	• Data integrity is maintained and all operations are documented and can be reviewed.

MINIMUM REQUIREMENTS

Minimum qualifications	National Diploma (or equivalent) in mechanical or chemical engineering or a related field			
Minimum experience (type and years)	1 years' experience in membrane electrode assembly component preparation and testing			
Skills	Mechanical or chemical engineering, technology development, research			
Knowledge	Catalyst materials, catalyst ink preparation MEA preparation techniques and fuel cell in-situ testing			
Professional registration or license requirements	N/A			
Other requirements	Good laboratory practices			
Competencies (Refer to UCT Competency Framework)	Competence	Level	Competence	Level
	Analytical	1	Communication	1
	Problem Solving	1	Teamwork/Collaboration	1
	Professional knowledge and skill	1	Building interpersonal relationships	1
	Client/Student service and support	1	Planning & organizing	1

SCOPE OF RESPONSIBILITY

Functions responsible for	MEA preparation and testing processes
Amount and kind of supervision received	Full supervision. Frequent meetings with line manager as well as other Technical assistants.
Amount and kind of supervision exercised	Minimal supervision of training students and interns.
Decisions which can be made	MEA fitness for testing
Decisions which must be referred	Final decisions on MEA designs and materials

CONTACTS AND RELATIONSHIPS

Internal to UCT	Relationship with all technical, scientific and research staff and students in HySA/Catalysis, Catalysis Institute
External to UCT	Relationship with engineering team at HyPlat