**Department of Biomedical and Clinical Technology**

**Postgraduate Support and Research**

Undertaking postgraduate studies is an exciting prospect. Many undertake such studies to fulfil their will to continue learning and to contribute to the broader knowledge base. However, some may feel that the process is challenging, especially if there is a long gap between their prior qualification and their current studies. They may require some support in this process. We will provide support for all postgraduate students by way of the following workshops:

* Postgraduate Preparatory Workshop: Covering the following: Developing a research proposal, Student-supervisor relationship, Postgraduate Housekeeping, Research Ethics
* Scientific Writing
* Information Resources
* Endnote

***About the Department***

The Department of Biomedical and Clinical Technology is made up of a dynamic team of Medical Technologists and Clinical Technologists.

Vision:

Our vision is to be the leading department in the Faculty of Health Sciences and the Durban University of Technology in providing socially responsive education for the development of health care graduates who are able to become leaders in the provision of high quality patient care.

Mission:

The department of Biomedical and Clinical Technology is committed to student-centered approaches to teaching, learning, assessment and research within a dynamic and authentic real-world environment, whilst promoting and upholding professional values and ethics in response to needs of the community and the profession. We are also committed to continued education and professional development of staff, students and alumni.

The graduate attributes as per our programme overview are listed below:

1. Use a range of information technologies to identify, gather and disseminate information.
2. Engage in the generation of new knowledge in their specialist professional disciplines and academic fields which will be investigated and recorded scientifically.
3. Work independently, identify, critically analyse and solve problems in their professional, individual and societal environments
4. Lead and effectively manage team members in an organisation and within their communities.
5. Be aware of cultural diversity and show respect to indigenous knowledge, cultures and values
6. Think critically and have excellent decision making skills including awareness of personal strengths and limitations.
7. Communicate effectively within the health care and educational environment, using visual, mathematical and/or language skills in the modes of oral and or written presentation
8. Use science and technology effectively and critically, showing responsibility towards the environment and health of others
9. Participate as responsible citizens in the life of local, national and global communities

***The Academic Team and their research interest areas:***

Dr Rosaley Prakaschandra: HOD research interest areas include: Cardiology, Molecular Diagnostics

Mr Mduduzi Memela: Programme Co-ordinator Clinical Technology, research interest areas include Critical Care, Nephrology,

Dr Nonhlanhla Mbatha: Programme Co-ordinator Biomedical Technology, Lecturer Biomedical Technology, research interest areas include Microbiology, Molecular Diagnostics,

Dr Jerry Mohapi Senior Lecturer Clinical Technology, research interest areas include, Perfusion, Education,

Dr Pavitra Pillay: Senior Lecturer Biomedical Technology, research interest areas include Cytopathology, Public Health, Health Management and Neglected Tropical Diseases

Mrs Brenda Mkhize: Senior Lecturer Biomedical Technology, research interest areas include Haematology, Molecular Diagnostics

Ms Thandie Ndlovu: Lecturer Biomedical Technology, research interest areas include Microbiology, Virology,

Mr Derrick Govender: Lecturer Biomedical Technology, research interest areas include Chemical Pathology,

Mr Clive Sydney: Lecturer Biomedical Technology, research interest areas include Histopathology, Molecular Diagnostics,

Dr Sherilene Benjamin: Lecturer Clinical Technology, research interest areas include Nephrology

***Programmes and PG Courses offered and entrance requirements***

For a **Master’s Degree** the procedure and requirements are as follows:

Biomedical Technology

The entrance requirement for a **Master of Health Sciences in Medical Laboratory Science** is the Bachelor of Health Sciences in Medical Laboratory Science or an equivalent qualification such as a B Tech in Biomedical Technology or any other equivalent honours degree in laboratory medicine. *Please note that an equivalent qualification requires an application for conferment of status.*

Clinical Technology

The entrance requirement for the **Master of Health Sciences in Clinical Technology** is the Bachelor of Health Sciences in Clinical Technology or an equivalent qualification such as a B Tech in Clinical Technology or equivalent honours degree. *Please note that an equivalent qualification requires an application for conferment of status.*

For a **Doctoral Degree** the procedure and requirements are as follows:

Biomedical Technology

The entrance requirement for the **Doctor of Medical Laboratory Science** is the Master of Health Sciences in Medical Laboratory Scienceor equivalent qualification. *Please note that an equivalent qualification requires an application for conferment of status.*

Clinical Technology

The entrance requirement for the **Doctor of Medical Clinical Sciences** is the Master of Health Sciences in Clinical Technology or equivalent qualification. *Please note that an equivalent qualification requires an application for conferment of status.*

Links to:

1. Post Graduate application form 2018
2. General information to PG students in the department

***Partners:***

Colleagues from both state and private laboratories and hospitals where our students are employed. Besides collaboration within the Faculty of Health Sciences and the DUT we also have links with colleagues from local, national and international Universities and Universities of Technology.

***Departmental Publications:***

**2017**

**Mkhize, B**., Mabaso, M., Mamba, T., Napier, C. and Mkhize-Kwitshana, Z. 2017. The Interaction between HIV and Intestinal Helminth Parasites Coinfection with Nutrition among Adults in KwaZulu-Natal, South Africa. *BioMed Research International*, 2017

**Mbatha, J. N.,** Taylor, M., Kleppa, E., Lillebo, K., Galapaththi-Arachchige, H. N., Singh, D., Kjetland, E. F., Baay, M. F. and Mkhize-Kwitshana, Z. L. 2017. High-risk human papillomavirus types in HIV-infected and HIV-uninfected young women in KwaZulu-Natal, South Africa: implications for vaccination. *Infectious Diseases*, 49 (8): 601-608.

Malapermal, V., Botha, I., Krishna, S. B. N. and **Mbatha, J. N.** 2017. Enhancing antidiabetic and antimicrobial performance of Ocimum basilicum, and Ocimum sanctum (L.) using silver nanoparticles. *Saudi Journal of Biological Sciences*, 24 (6): 1294-1305.

**2016**

**Prakaschandra DR**, Gordon M & Naidoo DP. Are common polymorphisms of the Lipoprotein Lipase and Human Paraoxonase-1 Genes Associated with the metabolic syndrome in South African Asian Indians? J Clin Exp Cardiolog 2016;7 (6):452

Meyer R, Van Schalkwyk SC, **Prakaschandra R**. The operating room as a clinical learning environment: An exploratory study. *Nurse Education in Practice*2016(18):60-72

**Prakaschandra DR**, Esterhuizen T, Motala AA, Gathiram P, Naidoo DP. High prevalence of cardiovascular risk factors in Durban South African Indians: The Phoenix Lifestyle Project. *South African Medical Journal* 2016; 106(3):284-289

**Prakaschandra R** & Naidoo DP. Increased waist circumference is the main driver for the development of the metabolic syndrome in South African Asian Indians. Diab Met Syndr: Clin Res Rev (2016). <http://dx.doi.org/10.1016/j.dsx.2016.12.011>

**Prakaschandra R**. Type two diabetes mellitus: an overview of prevalence, pathogenesis, complications and treatment options. *Medical Technology* 2016; 30(2): 17-21.

**Prakaschandra DR** & Naidoo DP. Glycaemic control profile in diabetic patients: A sub-analysis of the Phoenix Lifestyle Project. EMBJ 2016; 11(05):33-39. 2016

**Pillay, P**., van Lieshout, L., Taylor, M., Sebitloane, M., Zulu, S. G., Kleppa, E., Roald, B. and Kjetland, E. F. 2016. Cervical cytology as a diagnostic tool for female genital schistosomiasis: Correlation to cervical atypia and Schistosoma polymerase chain reaction. *Cytojournal*, 13 (1): 10.

Holmen, S., Galappaththi-Arachchige, H. N., Kleppa, E., **Pillay, P**., Naicker, T., Taylor, M., Onsrud, M., Kjetland, E. F. and Albregtsen, F. 2016. Characteristics of blood vessels in female genital schistosomiasis: Paving the way for objective diagnostics at the point of care. *PLoS Neglected Tropical Diseases*, 10 (4): e0004628.

**2015**

Holmen SD, Kleppa E, Lillebø K, **Pillay P,** van Lieshout L, Taylor M, Albregtsen F, Vennervald BJ,Onsrud M, Kjetland EF, 2015. The First Step Toward Diagnosing Female Genital Schistosomiasis by Computer Image Analysis. *The American Journal of Tropical Medicine and Hygiene*: 15-0071.

Malapermal, V., **Mbatha, J**., Gengan, R. and Anand, K. 2015. Biosynthesis of bimetallic Au-Ag nanoparticles using Ocimum basilicum (L.) with antidiabetic and antimicrobial properties. *Advanced Materials Letters*, 6 (12): 1050-1057.

**2014**

**Pillay P**, Taylor M, Zulu SG, Gundersen SG, Verweij JJ, Hoekstra P, Brienen EA, Kleppa E, Kjetland EF, van Lieshout L, 2014. Real-time polymerase chain reaction for detection of Schistosoma DNA in small-volume urine samples reflects focal distribution of urogenital Schistosomiasis in primary school girls in KwaZulu Natal, South Africa. *The American Journal of Tropical Medicine and Hgiene* 90: 546-552.

**Memela ME**, Gopalan PD, (2014). Variations in endotracheal tube cuff pressure: Is 8-hourly monitoring enough? *South African Journal of Critical Care*;30 (2):35-40.

***Contact:***

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