

**FURTHER PARTICULARS RELATING TO THE POST OF LECTURER NGAP IN THE DEPARTMENT OF BIOCHEMISTRY,
MICROBIOLOGY AND BIOINFORMATICS**

THE DEPARTMENT

The BMB department is home to 11 academic staff members, 14 support staff members, 17 post-doctoral fellows and 59 postgraduate students carrying out research in three disciplines, namely Biochemistry, Microbiology and Bioinformatics. The department hosts two research units, the Biomedical Biotechnology Research Unit (BioBRU), led by a DST/NRF SARChI Chair in the Molecular and Cellular Biology of the Eukaryotic Stress Response, and the Research Unit in Bioinformatics (RUBi). All staff members are actively engaged in research supported by prestigious local national and international grants, including the South African National Research Foundation (SA-NRF), Medical Research Council (SA-MRC), Department of Science, Innovation and Technology (SA-DSIT) and Technology Innovation Agency (SA-TIA) and the Gates Foundation, United Kingdom Newton Fund, Swiss Medicines for Malaria Venture and pharmaceutical companies Novartis and GlaxoSmithKline. Research conducted by the various research groups covers diverse topics and sub-disciplines. Fundamental biomedical research projects include natural product and synthetic chemistry drug discovery programmes using computational and laboratory-based methods aimed at communicable (pathogenic bacteria, HIV, SARS-CoV2) and non-communicable (cancer, diabetes and obesity) diseases of national and regional importance. It further includes research into the stress response machinery of cancer cells, as well its role in Kaposi's sarcoma-associated herpesvirus biology and the interaction between picornaviruses, TB bacteria and Salmonella bacteria and host cells. The department also hosts the SA/UK Antimicrobial Drug Discovery (ADD) Hub, focusing on the discovery of novel antimicrobials to address the increasing prevalence and threat of multi-drug resistant bacteria. The ADD Hub, collaboration with the South African Institute for Aquatic Biodiversity, has developed a multi-omics biodiscovery platform to assess the potential of natural products as chemical leads for drug development. One Health-related water quality assessment is also a research focus in terms of bacterial pathogenesis mechanisms, antimicrobial resistance, the transmission pathways of infectious pathogens and the environmental impact of xenobiotic's on aquatic systems. In addition, the department hosts a Node of the TIA-DSIT-funded Industrial Biocatalysis Hub (IBH) (based at the Council for Scientific and Industrial Research-CSIR), which focuses on the use of biocatalysis for commercialisation of products and processes in industry. The current focus of the IBH Node is on the production of bioproducts from kelp biomass and the use of enzymes to improve the nutritional content of poultry feed. Other research into biotechnological applications in the department includes the investigation of mycorrhizal fungi for application as biofertilizers in horticulture, agriculture and forestry and the exploitation of insect viruses for agricultural pest control. In terms of teaching and learning, the department offers Biochemistry and Microbiology courses at second and third year, as well as Honours levels. MSc and PhD degrees by research thesis are offered in Biochemistry, Microbiology and Bioinformatics. In addition, a one-year Masters degree in Bioinformatics, comprising both coursework modules and a research thesis, is also offered within the department. Staff and postgraduate

students in the department are actively involved in community engagement initiatives linked to their research, including internships and academic exposure programmes, among others.

THE FACULTY

The Faculty of Science is a grouping of 14 Departments and two associated research Institutes (Institute for Water Research, IWR; and the Institute for Environmental Biotechnology, EBRU).

The departments can be grouped into mainly four broad areas which are:

- The biological sciences (Botany, Human Kinetics & Ergonomics, Ichthyology & Fisheries Science, Zoology & Entomology, and Microbiology)
- The earth and environmental sciences (Environmental Science, Geography, and Geology)
- The chemical sciences (Chemistry, Biochemistry, and Biotechnology)
- The mathematical and physical sciences (Computer Science, Mathematics, Mathematical Statistics and Physics).

Although these groupings exist, the boundaries are not clearly defined and some departments and staff are active within more than one group. Indeed, departments and staff in departments collaborate with colleagues from all the other faculties in teaching, research and community engagement.

The Departments are mostly small with five to 10 staff and the total academic staff complement of the Faculty is 102. Our academic staff are well-qualified and more than 90% have a PhD. Our departments are well supported by technical staff.

The Faculty is led by a full time Dean with the support of two part-time Deputy-Deans and a Faculty Officer.

The Dean and Administration Officer have offices in the Schönland Building in the garden of the Botany Department.

While we do not have a vision and mission statement, we believe that the Faculty of Science is:

- Learned, and characterised by learning and scholarship in all that we do;
- Fit for purpose;
- Characterised by collegiality (relating to or involving shared responsibility and power) and a real concern for the well-being and success of others;
- Forward looking.

The purpose of the Faculty of Science is:

- To educate, and through education help create the next generation of critical thinking, ethical scientists, researchers and citizens;
- To research, and through research answer important questions that advance knowledge and improve quality of life;
- Through education and research, promote transformation.

As a Faculty, our focus is firmly on Teaching & Learning and Research with Community Engagement cutting across our activities.

Access and Success

Students are admitted to the Faculty of Science based on their performance (APS) in school leaving examinations and a range of additional factors. When the APS is above 40 points, the additional factors play a lesser role, but for students with points between 35 and 40 we look very carefully at all of the socio-economic information that is available and make a decision.

As a Faculty, we monitor success rates every year so that we can detect changes, highlight success and deal with problems.

At first-year level important indicators are the average number of credits gained per student, the percentage of students passing fewer than 4 credits (the minimum needed to avoid exclusion) and the percentage passing 6 or more credits (at least 6 credits are required to move into second year). About 70% of students pass at least 6 courses in their first year. At the end of second year about 85% of students are in a position to complete the following year and in third year more than 80% of those who are expected to complete their degree do so. Of those who complete their degrees, about 70% do so in the minimum time.

THE POST INCLUDING ROLES AND RESPONSIBILITIES:

All academics are responsible for the dissemination of knowledge (teaching and learning), creation of knowledge (research) and community engagement, recognising that there are differences in the execution of these responsibilities within the various departments and Faculties. Academics are also expected to assume some administrative, management and/or leadership duties at the departmental, Faculty and/or University level, and make some contribution to their profession.

In addition, a Professor and Associate Professor are to provide academic leadership in teaching and learning, research, and community engagement, as well as to contribute towards the governance of the institution. This leadership contribution of the Professor should be evidenced at the departmental, Faculty and institutional levels. In particular, the successful candidate will be required to assume leadership of curriculum development within the discipline.

THE UNIVERSITY:

Rhodes University offers academics a collegial environment where its small size contributes to the quality of work life experienced by staff. A nationally recognised Centre of Higher Education Research, Teaching and Learning (CHERTL) supports academics' professional development as teachers. A highly efficient Research and Innovation Office, led by the Deputy Vice-Chancellor: Research, Innovation and Strategic Partnerships, seeks to assist academics actively pursuing research interests. A well-functioning and committed administration supports the academic endeavour of the University.

New staff are offered the following benefits:

- Payment of reasonable relocation expenses by the institution (further details are provided with an offer of employment);
- Transit accommodation for at least six months, possibly up to one year, at reasonable market-related prices, subject to availability;
- Possible transferral of academic leave credits (further details are provided with an offer of employment);
- Competitive medical aid benefits (Rhodes University runs its own in-house medical aid scheme, which has resulted in it being able to offer benefits that compare favourably with other service providers at a lower cost price) and an employer contribution of 50% of medical aid costs;
- Competitive retirement fund options with an employer contribution of 15%;
- Payment of a thirteenth cheque (further details are provided with an offer of employment);
- Housing allowance (further details are provided with an offer of employment).

The University's current remuneration strategy is to pay academics at the 50th percentile (in the middle of the market compared to other HE employers) of the Higher Education market. An offer made to a prospective staff member will seek to ensure parity with current staff members. A measure of flexibility is provided in the final negotiated salary package, which will be agreed upon between the candidate and the Director: People and Culture.

Living in Makhanda and working at Rhodes University offers several additional benefits:

- Small classes of motivated and, in some cases, exceptionally talented students;
- A supportive environment within academic departments;
- Reduced fuel bills;
- Proximity to good schools where children can attend as day scholars:
 - <https://www.ru.ac.za/jobs/chooserhodes/choosegog/schoolsingrahamstown/>
 - <https://www.ru.ac.za/jobs/chooserhodes/choosegog/pre-schoolsingrahamstown/>
- Proximity to beautiful beaches;
- Nearby nature reserves and wilderness areas;
- Clean, fresh air and a healthy lifestyle;
- A small city with many cultural and academic activities;
- Generous parental leave benefits: <https://www.ru.ac.za/jobs/chooserhodes/lifestyle/parentalbenefits/> .

THE SELECTION PROCESS:

(a) For all applicants applying:

- A letter of motivation. Candidates are asked to outline their research, teaching as well as community engagement interests, and to explain how they see these in terms of complementing existing departmental expertise.
- Full Curriculum Vitae.

