



MATHEMATICS RESEARCH LEAD

(LECTURER / SENIOR LECTURER)

CENTRE FOR EDUCATIONAL TESTING FOR ACCESS AND PLACEMENT

CENTRE FOR HIGHER EDUCATION DEVELOPMENT

UCT seeks a candidate for the position of Mathematics (MAT) Research Lead in the Centre for Educational Testing for Access and Placement (CETAP), Centre for Higher Education Development (CHED), for appointment as soon as possible.

The Centre for Educational Testing for Access and Placement's (CETAP) mission as a department within the Centre for Higher Education Development (CHED) is to provide educational testing that contribute to access and success at the University of Cape Town and in the broader higher education and training sector. In realizing this mission, CETAP develops educational tests that are reliable and valid in these higher educational contexts. Its educational measurement and learning analytics research supports and informs teaching and learning and educational policy relating to admissions (selection and placement) and throughput within these contexts.

The role of the Mathematics Research Lead is in establishing a sound basis for the provision of effective Mathematics tests which meaningfully represent the purposes of the National Benchmark Test, Mathematics Comprehension Test and future projects. The output provided by the research lead establishes the credibility of these tests to provide meaningful information to both Higher Education and Basic Education, and other institutional users. The role of the research lead should support the Teaching and Learning Project and the Research and Development agenda undertaken by CETAP.

An additional function of the Mathematics Research Lead is to use data provided by test analysis to inform stakeholders on areas of concern which could lead to educational intervention at school level and within Higher Education. The Research Lead would need to participate in teaching and learning workshops at which identified areas of concern and possible interventions would be addressed.

Requirements:

- A Master's degree relevant to the Mathematics domain with at least a major in Mathematics.
- For appointment at Senior Lecturer level, a PhD.
- A demonstrable record of academic achievement in research.
- Experience in the Mathematics domain requirements of Higher Education entry-level curricula.
- Ability to meet project deadlines in a pressured environment.
- Ability to lead and manage collaborative projects.

The following would be advantageous

- Experience of test development.
- Experience working in a collaborative research environment.
- Experience in secondary school mathematics education with a focus on the transitions between school and higher education study; student readiness issues; and curriculum reform.
- A strong network of research and professional connection in the Higher Education sector in South Africa;
- Ability to engage with Higher Education academic and management staff at all levels;

Responsibilities:

The main purposes of this position is to establish a sound basis for the provision of effective mathematics tests which meaningfully represent the purposes of the tests developed and administered by CETAP and to manage the development of these tests. The responsibilities of the Mathematics Research Lead include:

- **Research:** In consultation with the CETAP Director and the Test Development Co-Ordinator, identify research topics and initiate processes necessary to carry out the required research and actively collaborate in the preparation of research papers for peer reviewed journals as well reports for donors, clients and institutions, and presentation materials for seminars and workshops.
- **Test development, assembly and translation:** Regularly reviewing and revising (when necessary) the Mathematics domain test specifications with respect to content and cognitive levels. Creating new tests and ensure that translations are done for each academic year intake cycle, taking into account or adapting the base form to be used for each cycle, test data of the previous cycle, and all other review information. Reviewing test data (psychometric reports, etc.) in order to improve and adapt tests on an on-going basis.
- **Item development and review:** Liaising with subject specialists in Higher Education and teachers in Basic Education with respect to curriculum changes, challenges and specific demands that could have an impact on test requirements.

Liaising with academics actively involved in the Mathematics domain at university entry level with a view to setting up item development workshops as required, and item review workshops after each test cycle.

Reviewing test information after each cycle, with a view to improving tests in the next cycle.

- Provision of teaching and learning information: Use statistical data arising from the tests to determine which aspects of the tests can be used to provide diagnostic teaching and learning information to stakeholders in Basic and Higher education sectors. Coordinate and facilitate seminars at which such information can be shared in order to effect curriculum reform and better teaching and learning.
- Standard setting: Establish links and liaise with institutional users of NBTs to draw on the expertise of suitable academics to participate in standard setting workshops in the Mathematics domain

The annual cost of employment, including benefits at the respective levels for 2016 are:

- Lecturer R558 915
- Senior Lecturer R687 208

To apply, please e-mail the below documents in a **single pdf file** to Ms Edith Graham at recruitment04@uct.ac.za

- UCT Application Form (download at <http://forms.uct.ac.za/hr201.doc>)
- Cover letter, and
- Curriculum Vitae (CV)

Please ensure the title and reference number are indicated in the subject line.

An application which does not comply with the above requirements will be regarded as incomplete.

Telephone: 021 650 5405 **Website:** www.cetap.uct.ac.za

Reference number: E16081 **Closing date:** 27th June 2016

UCT is committed to the pursuit of excellence, diversity and redress in achieving its equity targets. Our Employment Equity Policy is available at <http://www.uct.ac.za/downloads/uct.ac.za/about/policies/eepolicy.pdf>

UCT reserves the right not to appoint.