



UNIVERSITY OF  
KWAZULU-NATAL™  
INYUVESI  
YAKWAZULU-NATALI

**EXTENDED  
LEARNING**

## Mathematical Literacy Upgrade to Grade 12 Mathematics



Durban/PMB

OUR WORLD IS CHANGING... SHOULDN'T YOU?



# Mathematical Literacy Upgrade to Grade 12 Mathematics

## Programme overview and objectives:

Thousands of students who pass Mathematical Literacy during the National Senior Certificate examinations cannot gain access to Science and Commerce related degrees because they do not meet the entrance requirements of universities. Perhaps you are one of them, convinced that with a little help, and a lot of commitment and hard work, you can bridge the gap that converts Mathematical Literacy to Mathematics.

This semester-long (6 month) course is intended to upgrade your level of Mathematical skills and understanding, providing possible access to a Bachelor's degree at UKZN, where Grade 12 Mathematics (Pure Math) is an entrance requirement, provided that the applicant meets the other qualifying criteria of the University. Applicants also need to enquire directly with the relevant College before completing this course.

## How you will benefit. You will learn to:

- Perform basic algebraic operations on real numbers
- Solve real-valued equations and inequalities
- Identify a function, sketch and interpret its graph
- Understand the concept of a derivative and its applications
- Demonstrate the ability to solve real-world problems
- Work in small groups to enhance your understanding of concepts in Mathematics through discussion

## Key focus areas:

- Number line, intervals, equations and inequalities, number patterns and sequences
- Polynomials and rational functions
- Linear, quadratic, exponential, hyperbolic functions and graphs
- Coordinate geometry – parallel and perpendicular lines, circles and tangents
- Introduction to calculus – limits, derivatives and applications
- Trigonometry – definitions, identities and equations, graphs and solutions of triangles

## Who should attend:

Students who have done Mathematical Literacy at high school and wish to upgrade this to the required NSC Level Mathematics. These students will then be eligible to register for a B Com or B Sc degree at UKZN, provided that the applicant meets the other qualifying criteria of the University.

## Entrance requirements:

To be considered for registration, an applicant must have obtained a final mark of no less than 50% in Mathematical Literacy in Grade 12. Students who did Pure Mathematics in Grade 12, may also choose to upgrade their skills and mark through this course.

## Programme fee:

The programme fee of R10 490 (incl. VAT) covers tuition and instruction material

Facilitators include:



### Dr Maga Moodley

Maga joined the Springfield College of Education in 1989 as a lecturer, and in 1992 received a Harvard Scholarship to undertake a Master's in Education degree in the US. In 1995, Dr Moodley served as the coordinator of the AMESA National Conference, and was elected Vice President: Natal Region in 2001. He joined the University of Natal as a senior tutor in 2002, and was appointed as a Lecturer in the School of Mathematics in 2007. During the past 10 years, Dr Moodley was actively involved in Mathematics education in rural communities, in stimulating excellence against international norms through AMESA, and was invited to present at International conferences for the promotion of Mathematics education.



### Shunmugam Pillay

Shunmugam is a lecturer at UKZN. He obtained Dip Ed, a BA and a B Ed Hons (UNISA). He has also completed his Master's in Higher Education specialising in Mathematics. He has published and presented several papers: teaching and learning Mathematics, Geometric centroids of polygons and Blended Learning (pilot project- UEL). He is a coordinator of bridging modules at UKZN and a SAMF coach for Maths Olympiads. Shunmugam received a distinguished Teacher's Award in 1997: AMESA KZN.



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UKZN Extended Learning (UEL) is committed to enrichment through lifelong learning, by providing high quality credit and non-credit bearing short courses and academic programmes in collaboration with schools and colleges of the University of KwaZulu-Natal. In a fast-changing environment, developing relevant and useful skills and knowledge, and the capacity to deliver results, is more important than ever. Our courses are designed using the very best methods by combining content, based on both tried and tested results, and recent cutting edge research, with interactive experiential teaching and learning from local and international faculty and guest speakers.

## Duration:

15 weeks (2 sessions/8 hrs per week)

## Dates:

For updated course dates, please contact us or see our website: [www.ukznextendedlearning.com](http://www.ukznextendedlearning.com)

## Contact:

Adiela Raiman  
T: +27 31 260 4665 E: [raiman@ukzn.ac.za](mailto:raiman@ukzn.ac.za)  
[www.ukznextendedlearning.com](http://www.ukznextendedlearning.com)

University of KwaZulu-Natal, Howard College Campus,  
Gate 9, Room 212, Innovation Centre, Rick Turner Road,  
Durban, 4001