**Mathematical Thinking (MT33) Course**

**June 2020**

AIMSSEC is the Schools Enrichment Centre of AIMS (African Institute for Mathematical Sciences)and was established in 2003. The objective of AIMSSEC is to play a key role in the extension of educational opportunities for disadvantaged communities in South Africa; and to raise standards by improving the quality of teaching and learning of mathematics.

AIMSSEC is a community of academics, researchers, teacher trainers, school teachers and subject advisers; all working in mathematics education who share a commitment to lifelong learning and a dedication to improving the teaching and learning of mathematics. The AIMSSEC community involves all those who have taught on the AIMSSEC courses as well as former students. There is a shared belief that we must learn from mathematics education research and that teaching for the 21st century must be different from the past because different skills are needed in this radically changed and rapidly changing society.

The **Mathematical Thinking** (**MT33**) course is for teachers and subject advisers and involves a residential course at Stellenbosch High School, 18 Jannasch Road, Mostertsdrift, Stellenbosch, 7600 in the June school holiday followed by 3 months of distance learning. All participants are expected to be in residence for the full duration of the course and are taught according to the phases of their learners; ranging from grade 4 to grade 12. There is a test at the end of the residential course to assess the content learnt during the course. Each participant is expected to complete 2 assignments following the residential course. The assignments are designed to encourage the participants to reflect on theirteaching practice as they embark on a journey of lifelong learning.

At the residential course, sessions run from 8:15 to 20:00 each day, starting with an 80 minute mathematics plenary session **where all the teachers from the different phase groups learn together**. These sessions involve mathematics that is new to all the teachers and that has relevance to teaching mathematics in all phases. Plenaries may include for example: designing tessellations and studying their occurrence in African art, making mathematical models, people mathematics, for example in data handling and graphs, problem solving involving systematic and logical thinking, problems faced when teaching learners using English as a language of instruction, reflecting on how chance (probability) affects our daily lives, building and using geoboards, playing mathematical games and reflecting on their value in teaching and learning.

The **purpose of the MT course** is to secure and extend subject knowledge of mathematics and to develop pedagogical insights which lead to inquiry-based learning. There is an emphasis on **planning for learning** (rather than planning for teaching), differentiation, inclusive learning, progression, reflection on one’s practice using journals and the use of formative assessment tools to identify strengths and weaknesses of learners.

Our **target audience** is teachers who would like to change from the traditional “chalk and talk” approach to a more learner-centred one, who want to be enthused with a fresh approach to teaching and learning mathematics, who are newly qualified or under-qualified and want to be part of a mathematics community to share good practice and try new ideas and those who intend to further their studies. **Applicants must be practicing mathematics teachers with a teaching qualification.**

The MT course is also used as a **selection instrument** for enrolment into the AIMSSEC sequence of 6 further **Subject Leader Training Courses** to equip teachers to be Heads of Department, teacher trainers for an NGO or subject advisers for local government. **A Merit on the MT course (60% or higher) is required for eligibility for the Subject Leader courses.** As you pass each course you will be awarded an AIMSSEC certificate. The MT course is endorsed by the South African Council for Educators (SACE) for 20 professional development points and all courses will be registered for SACE endorsement and professional development points. Every course has a residential component followed by 3-months or 6-months distance learning and involves mathematics subject knowledge, pedagogy and IT. Crucial issues in teaching and learning mathematics, as depicted in the diagram, are the foci of the courses. All these issues are also discussed during the rest of the programme.

The MT course focuses on training mathematics teachers in grades 4 and 5 (with aspects of grade 6) for the Intermediate Phase group; grades 7 and 8 (with aspects of grade 9) for the Senior Phase group and grades 10 and 11 for the FET band. The coverage includes number, algebra, shapes, measures, data handling and probability. The course also includes IT sessions to introduce teachers to using technology in teaching mathematics and in their professional work.

The course fee includes the tuition fee, accommodation, meals and stationery during the residential course. Funds are limited but bursaries normally include a contribution to travel expenses for the most economical method of transport (e.g. Translux or City to City buses, not air fares).

Teaching and learning resources are provided by the lecturers and the teachers are taught how to make cost effective teaching and learning resources. Admission to the course depends on the support of the applicant’s school principal and the head of mathematics.

High standards are maintained by a team of local and international experts in mathematics education. The international team work as unpaid volunteers. The course has been conducted 31 times since 2004 for 2000 teachers from different provinces in South Africa.

**Dates for the June courses to be decided.**

For further details please email: admin@aimssec.ac.za.

If you are interested in attending the MT32 course please complete the application form and attach certified copies of ID, payslip, main teaching qualifications and SACE certificate; then email, fax or post the documents to one of the options below, to reach us by **15 November 2019**:

**Email**: admin@aimssec.ac.za

**Fax**: 086 263 1268

**Cell**: 082 482 4461

**Postal address**: AIMSSEC

MT31 Application

6 Melrose Road

Muizenberg

Cape Town 7945

**MT33 APPLICATION FORM**

(June 2020)

Use block letters and ticks to fill in all 5 sections of the application form. The checklist on page 5 will help you to make sure the application is complete.

1. **Personal Information**

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| **Title:**  | **Mr.** |  | **Ms.** |  | **Mrs.** |  | **Other (specify)** |  |

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| **Gender:** | **Male** |  | **Female** |  |

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| **First names:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **Initial(s)** |  |  |  |

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| **Surname:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **Citizenship:** | **South African** |  | **Other(specify)** |  |
| **Population group:** | **White** |  | **Black** |  | **Coloured** |  | **Indian** |  | **Other (specify)** |  |
| **Home language:** |  |

1. **Contact details**

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| **Cell phone number:**  |  |  |  |  |  |  |  |  |  |  | **Fax:** |  |  |  |  |  |  |  |  |  |  |

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| **Postal address:****Post code:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Next of kin’s Tel:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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**FOR OFFICE USE ONLY**

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1. **Details of current employment**

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| **Position:**  | **Teacher** |  | **H. O. D.** |  | **Other(specify)** |  |

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| **Currently teaching mathematics Phase** | **IP** | **SP** | **FET** |
| **Grade** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |

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| **Principal:**  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Principal’s Tel:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **Name of school:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **School address:****Post code:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **District:** |  |  |  |  |  |  |  |  |  |  |  |  |  | **Province:** |  |  |  |  |  |  |  |  |  |  |

1. **Main Qualifications**

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| **Details of main qualifications** |
| **Period** | **Name of University, Technikon or College** | **Name of degree / dipl / cert** | **Completed****Yes / No** | **Student Number** |
| **From****Yr.** | **To****Yr.** |
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| **Highest level of mathematics studied:** *(Specify course / module / grade)* |

1. **Miscellanea**

 ***Yes No***

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| 1. **Do you have any special dietary requirements?** *If* ***yes*** *please specify below:*
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| 1. **Do you have any disability?** *If* ***yes*** *please specify below:*
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| 1. **Do you have any medical condition?** *If* ***yes*** *please specify below:*
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| 1. **Do you object to AIMSSEC using your photograph in marketing materials?**
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| 1. **When travelling to Cape Town by bus, which town would you travel from (it can be the town where you live)? What is the distance between this town and your home?**

**Name of nearest town: ……….………………………………… Distance from home:………**km |

**REFERENCE**

Please ask your Principal (or line Manager), as a senior person acquainted with your professional and academic work, to fill in the reference check form on your behalf, indicating your professional standing and general suitability as a **mathematics teacher** to undertake this course. This testimonial must be enclosed with the application form in a sealed envelope or returned directly to us by the referee. "Open" testimonials are not acceptable.

**ACCOMODATION**

Accommodation is in student hostels in a boarding school for the duration of the course. Teachers usually share a room. All accommodation, food and tuition fees are catered for by the bursaries offered to teachers on the course. No children or other family members can be accommodated.

**TRAVEL**

Funds are limited but bursaries normally include a contribution to travel expenses for the most economical method of transport (e.g. Translux or City to City buses).

**Checklist**

Please go through the checklist to make sure you understand what is written in the application form and what you need to do. The checklist will also help you to make sure your application is complete. You can contact AIMSSEC on **021 787 9359** / **082 482 4461** or admin@aimssec.ac.za if you have any questions.

 ***Tick when done***

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| 1. **Have you completed all 5 sections of this form?**
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| 1. **Have you noted the closing date for applications? 15 November 2019**
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| 1. **Have you attached certified copies of the following documents?**
2. **ID**
 |  |
| 1. **Payslip showing persal number**
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| 1. **Teaching qualification**
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| 1. **Other university accredited qualifications**
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| 1. **SACE certificate**
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| 1. **If you post your application have you enclosed a sealed envelope with a referee form signed by your Principal/line manager?** *The referee form is the last page of the application form. If you email or fax your application please ask your referee to do it separately to the same contact number.*
 |  |
| 1. **Have you noted the contact details for sending the application form back to AIMSSEC?** *The contact details are on page 2.*
 |  |

Once the application is received, applicants will receive confirmation by ***sms***. Confirmation of receipt is not a guarantee of a place on the course. Acceptance will be confirmed at a later date. Information given in this form will be computerised and used to inform admission decisions.

I confirm that the information that I have given in this application is true and correct to the best of my knowledge, and I understand that if offered a place, I will be committing myself to a professional development short course.

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| **Signature of applicant:** |  | **Date:** |

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**So that referee form can be printed separately.**

**REFEREE FORM**

**MATHEMATICAL THINKING (MT33)**

Course held in the June 2020 school holiday.

**To the referee:** The applicant: ……………………………………………………………….. (**name**); is applying for admission to the **AIMSSEC** professional development course. Please complete the following and return to **AIMSSEC** via fax, post or email as shown above:

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| **Referee:**  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Position:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **Name of institution:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **Address:****Post code:** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 1. **For how long have you known the applicant?**
 |  **..... Years** |
| 1. **Comment on the applicant’s aptitude as a mathematics teacher.**
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| 1. **Comment on the applicant’s motivation, maturity, originality and initiative as a mathematics teacher.**
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| 1. **Comment on the applicant’s ability to conduct staff development sessions for other mathematics teachers at the school.**
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| 1. **For how many years has the teacher taught mathematics?**
 |  **.....Years** |

**I agree that the following recommendation will be kept confidential:**

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| **Signature of referee:** |  | **Date:** |  |