

Mamelodi dipolelelo

Fostering excellence in pathways to
STEM education



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We are Mamelodi Campus

The Mamelodi Campus of the University of Pretoria (UP) is a pathway for access to science, technology, engineering and mathematics (STEM) education and a hub of curricular community engagement and support for the Mamelodi community.

Mamelodi Campus primarily hosts the flagship Foundation Programmes of the University. These programmes focus on providing educational pathways into STEM fields in the faculties of Natural and Agricultural Sciences, Economic and Management Sciences, Veterinary Science and Health Sciences. They are designed for students who are willing to work hard to obtain their degrees, but who are not yet fully prepared for the challenges of higher education following high school.

The Foundation Programmes provide students with an extra year to study towards their degrees, where the first year

of study takes place on Mamelodi Campus. Since the inception of what was known as the BSc Four-year Programme in 2008, the initiative has made great strides towards ensuring access to higher education. Since then, the academic programme has been expanded to include a Foundation Programme in Economic and Management Sciences.

Mamelodi Campus is also home to a host of curricular community engagement activities that are indicative of the University's commitment to social and economic development in the country. These activities focus on pre-university support for school

learners and support for the broader Mamelodi community, and are in line with the University's strategy of being an anchor institution, dedicated to revitalising the communities in its immediate geographic environment.

Community engagement initiatives are carried out through the clinics on Mamelodi Campus, some of which contribute to the research focus of the campus. The clinics serve the community through both on-campus and off-campus activities. Several other UP faculties place students in the Mamelodi community for credit-bearing community engagement activities.



Dr Jeanine Mwambakana

Appointment of the Head of Academic Programmes

On 3 April 2017, Dr Jeanine Mwambakana joined the Mamelodi Campus as Head of Academic Programmes. Her vast experience in education will benefit the Foundation Programmes on the campus.

Dr Mwambakana's field of interest is that of addressing conceptual gaps between high school and university, particularly in the fields of maths and science. She spent 14 years at the Tshwane University of Technology (TUT) using her own advanced qualifications in Applied Mathematics to improve the quality of learners in STEM disciplines at tertiary institutions. She also has a diploma in Biochemistry and a degree

in Chemistry, and is currently busy with a Master's in Public Health. In 2011, she joined the Department of Science, Mathematics and Technology Education in the University of Pretoria's Faculty of Education, where she took her desire to improve the skills of learners entering higher education one step further by training prospective teachers in these highly sought-after disciplines.

As the focus of the Foundation Programmes at the Mamelodi Campus is specifically on improving skills in the STEM disciplines, she is the ideal candidate to provide academic leadership and mentor the Module Coordinators in the Foundation Programmes. Her vision is to improve the level of skills of students entering the mainstream programmes following their first year on the Mamelodi Campus.

From the Dean's desk



Prof Nthabiseng Audrey Ogude

It is a great pleasure for me to present the inaugural issue of *Mamelodi Dipolelo*, the official newsletter of UP's Mamelodi Campus.

Through *Mamelodi Dipolelo*, we are able to demonstrate the new strategic role of Mamelodi Campus and its alignment to the broader national role that UP plays in the Mamelodi community for the public good. The newsletter also foregrounds Mamelodi Campus as a unique asset that can complement the current repertoire of academic activities at UP.

Mamelodi Dipolelo showcases campus activities in three thrusts, reflective of the three focus areas of Mamelodi Campus: pre-university academic enrichment in Physical Science and Mathematics, the Foundation Programmes, and curricular community engagement through collaborative efforts. This edition highlights some significant strides towards academic excellence and innovation in community engagement.

Over the years, Mamelodi Campus student numbers increased from 330 in 2008 to 698 in 2015, and the campus now has a diverse student profile of 798 students. The intention is to reach the capacity of the campus in 2019, which is 1 000. This will happen without major infrastructural changes. The appointment of a Head of Academic Programmes in April 2017 puts the campus on a strong academic footing. The format of the Foundation Programmes has enabled a discernible increase in the pass rate of Mamelodi Campus students in their first year of study, thanks to its design and the intensive and comprehensive academic support offered to students. This is in line with the national emphasis on student success, and assists in addressing the challenge UP faces regarding

an unsatisfactory throughput rate of students. Current data indicates that students in the Foundation Programmes achieve higher pass rates for selected modules than their counterparts in the mainstream programmes, and a large number of these students complete their degrees in regulation time.

I also want to highlight one of our community engagement initiatives worthy of consideration for expansion and support, the Mamelodi Mathematics and Science Programme (MMSp). The programme caters for the development of talented young learners and currently hosts 300 high school learners from Grade 10 to Grade 12. It identifies young learners that show potential in Physical Science and Mathematics for support and development from an early age. The programme also has a concurrent professional development project for high school teachers.

Strategic focus and rebranding the campus

The signature academic offering of the campus is foundational provisioning in STEM fields. There is a plan to change the name of the campus to reflect its academic essence. The focus in 2018 will be to deepen the academic mission of broadening educational pathways and access to STEM fields, and specifically into professional programmes designated as scarce skills. The Foundation Programmes, along with the pre-university academic enrichment programmes in Mathematics and Physical Science, are key to the achievement of this goal. This strategic focus aims to deepen both the teaching and learning mission and the student life-cycle through the pioneering of an institution-wide

focus on Foundation Programmes as a "first choice" option for study and the launch of a pre-university academy that will proactively address the challenges of the school-university gap through the early identification and nurturing of talented and gifted learners. The academy will, among other things, offer selected credit-bearing university modules for talented learners both online and through face-to-face teaching and learning formats.

A research agenda that will develop a data analytics capability in the Foundation Programmes supports the teaching and learning mission. It emphasises disciplinary science education research that is focused on closing the conceptual gaps between school and university, and non-curricular challenges related to the transition from high school to the Foundation Programmes, as well as from the Foundation Programmes to the mainstream programmes.

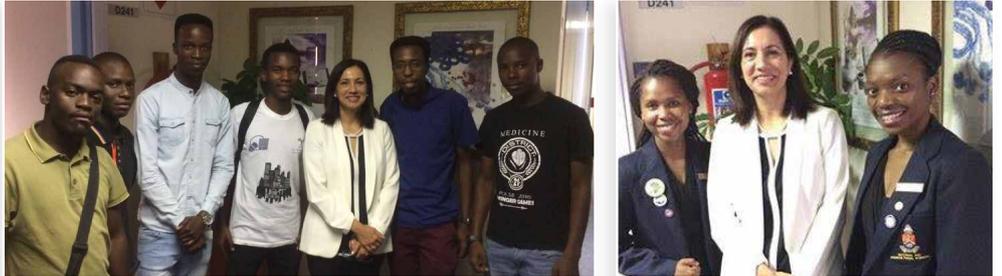
Finally, the aim of the strategic positioning is to clarify the role of the campus in supporting the socio-economic responsiveness agenda of the University and impact on disadvantaged communities. This secondary role supports UP's anchor strategy in the Mamelodi community in collaboration with the faculties that host clinics on the campus and those that place students in the Mamelodi community for various curricular community engagement activities. The main objective is to develop performance indicators for measuring UP's socio-economic impact in Mamelodi and facilitate internationalisation and inter-faculty collaboration through the Mamelodi Collaborative with Rutgers University-Newark.

Continuously improving Foundation Programmes based on REAL EXPERIENCES

The Foundation Programmes hosted at the Mamelodi Campus have changed the lives of thousands of students by giving them the opportunity to study, and by providing them with access to academic support in their pursuit of a tertiary qualification. To continue doing this successfully, the University is always looking for ways to improve the initiative's operations. Specifically, Foundation Programme alumni have been approached to provide input based on their own experiences.

VC visits Mamelodi Campus

On 30 March 2017, Vice-Chancellor and Principal, Prof Cheryl de la Rey, met with alumni of the Foundation Programmes to learn about the value they derived from the initiative. The students collectively expressed great appreciation for being on Mamelodi Campus and how this experience prepared them to transition successfully from high school to university-level study.



Prof De la Rey with Foundation Programmes alumni on Mamelodi Campus.



Prof Ogude discusses the marketing of the Foundation Programmes with alumni.



Delegates of the Foundation Programmes alumni workshop.

Securing support from alumni

On 19 August 2017, Prof Nthabiseng Ogude, Dean of Mamelodi Campus, hosted alumni to sound them out on the University's strategy to reposition the campus as an alternative path to STEM fields of study. The alumni at this meeting had all commenced their academic careers on Mamelodi Campus, and had completed at least their first degree in STEM fields. Prof Ogude wished to develop a recruitment and marketing strategy for the campus with the support of the students who demonstrated the success of the Foundation Programmes as a way into STEM fields at the University.

The workshop comprised presentations by Wallace Isaacs, Deputy Director of the Department of Enrolment and Student Administration (responsible for recruitment), and Isabel de Necker from the Department of University Relations (responsible for the University's marketing strategy).

The workshop culminated in the formation of an interim alumni chapter structure to help rally all Mamelodi Campus alumni in the effort to strengthen their bond with the campus and enlist their continued support of the academic programmes.

The alumni confirmed that their experience at Mamelodi had enabled them to transition successfully to the mainstream programme.

CHANGING LIVES

Belinda Moyo –
BSc (Physical Science)

How did the Foundation Programme impact on your life?

"The programme taught me time management and to use waiting time to be more productive. It also helped in adjusting to university life on main campus. The skills I acquired while at Mamelodi Campus helped me cope better with some of the challenges after having completed the Foundation Programme. I also made lifelong friends."

What are your future plans?

"I went on to complete an undergraduate and an honours degree in Physics, and am currently working on obtaining my master's degree while working at a nuclear energy consulting company. In the future, I hope to work towards seeing South Africa adapt to using renewable energy as the main source of energy nationwide."

Tebogo Jane Mello –
BSc (Physical Science)

How did the Foundation Programme impact on your life?

"The programme allowed me to experience an easy transition from high school to university-level studies. It also helped me to master time management skills. Mamelodi Campus and the Foundation Programme gave me an opportunity to network and socialise with a large mass of people with whom I still interact."

What are your future plans?

"I hope to build impactful relationships with younger students who intend to venture along a similar career path. I also hope to establish a successful career by honing my skills and developing into a competent individual. After having completed my honours degree, I secured employment within three months."

Teaching and Learning Day

hosted in collaboration with the Department for Education Innovation

Ensuring that Mamelodi Campus students reach their academic potential in order to enter subsequent study programmes is at the very heart of the campus's mandate. To ensure that students receive the best that the University has to offer, a Teaching and Learning Day was held on 1 June 2017.

The Teaching and Learning Day was an opportunity for the lecturers of the Foundation Programmes to exchange thoughts about their experiences and teaching practices that could be of value to others. The programme included discussions around "Who are we?", as well as "Who are they?", challenging lecturers to take a hard look at the purpose of their teaching activities.



Through the "Who are we?" presentations, participants had to reflect on their personal beliefs about students, learning, teaching, curriculum design and assessment as a first step towards formulating a personal teaching philosophy. They were also introduced to the three major learning theories of behaviourism, cognitivism and constructivism through interactive sessions.



The "Who are they?" session sought to sensitise academics to the diverse student population in order to accommodate this diversity in their teaching practices and curriculum planning, and to work towards transforming these to enhance student learning. This stems from the notion that teaching is not a linear, one-way delivery of knowledge, but rather an interactive process that requires participants to adapt to shifting contexts, demands of content and student input. This year, current and former students of the Foundation Programmes gave an account of their learning experiences on Mamelodi Campus to their lecturers. This helped lecturers to recognise the magnitude of the diversity among their students, both in terms of personal backgrounds and learning needs.

Planning for diversity in teaching must account for the reality that individuals do not all learn in the same way, and that any group of students will include students with a variety of learning needs. It may not be possible to predict or even discover all the different ways of learning represented among a group of students, and although module content may allow for some variety in teaching approaches, module goals may necessitate helping students to adapt to certain types of classroom experiences.

Teaching diverse learners requires teachers to monitor student progress and respond to student input – which might require them to teach differently.

In the midst of the progress taking place on Mamelodi Campus, lecturers still find the departmental workload and the implementation of a hybrid teaching model challenging.

However, the Teaching and Learning Day indicated that they remain enthusiastic about offering quality education and addressing these challenges by learning, mastering and constructively implementing new teaching methods and techniques.



Lethuxolo Nzima (left) was one of the students who delivered a presentation at the Teaching and Learning Day. He was also honoured as a top achiever from Mamelodi Campus in 2016.

INNOVATION IN TEACHING AND LEARNING

Mamelodi Campus is home to passionate academic staff that is dedicated to the development and implementation of innovative teaching and learning strategies in the classroom. The work of some exceptional Module Coordinators from core modules presented on the Mamelodi Campus is testimony to this.

Chemistry

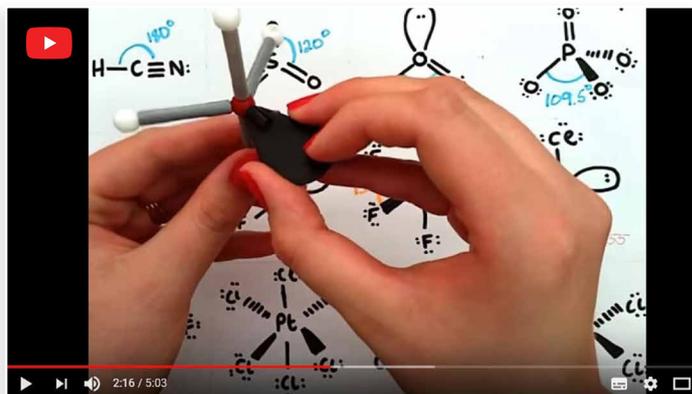
Christine Mundy is the Module Coordinator for the Chemistry module presented on the Mamelodi Campus. Some 500 students from all three BSc Foundation Programme groups take this module in their first year of study, and it provides a solid academic basis for students who plan to continue with either a BSc or BEng degree once they enter the mainstream programme.

A good understanding of the basic principles of first-year Chemistry is essential to ensure that students are able to grasp the more advanced principles that follow in later years. Many first-year students – not only those on Mamelodi Campus – are underprepared for the challenges of tertiary education. Lecturers therefore need to go out of their way to develop innovative strategies that will bring abstract constructs into the life world of students who have not been exposed to the wonderful world of Chemistry in their pre-university years.

By making use of practical examples, Christine exposes the community to science, thereby achieving excellence in teaching and learning. Challenges she experiences as a teacher of Chemistry relate to the fact that students often lack the confidence needed to engage with the

constructs of Chemistry. Their lack of prior experience puts them at a disadvantage to grasp the learning material, and the language barriers that many of them experience also need to be overcome. Christine found that the best way to approach these challenges was for the students to learn in a scaffolded or structured way, as well as by exploring the world around them and uncovering the amazing world of science.

Aware of the fact that students often experience a very high cognitive load when grasping the essentials, Christine developed a series of YouTube videos to explain the basic principles of the first-year programme. By combining audio with visual stimuli, she enabled the students to discover these principles for themselves. The success of this innovative strategy is reflected in the students' results, as well as the passion they have developed for this subject.



Language and Study Skills

Ilse Fouché is the Module Coordinator for the Language and Study Skills module on Mamelodi Campus. These are important skills that need to be mastered by students who are to succeed at university level. First-year students across the University are required to take some form of academic literacy programme to enable them to cope with the academic demands of university programmes.

The module that is presented on the Mamelodi Campus has been customised for Foundation Programme students, and focuses on their specific needs. There are two different modules: one that has been designed for students following the three BSc programmes and one for the BCom students. Ilse collaborates with the coordinators of the various academic modules to ensure that the practical exercises in the module relate to the content of the students' academic programmes. This reinforces learning and enables students to address problems with content that is written in an academic style they have likely not encountered in their high school studies.

Students attend classes in this module for four hours a week, and also have the opportunity to consult with the lecturer. The classes are kept small, with 50 to 60 students in a class. This ensures that each student receives

personal attention, and any challenges that students experience can be identified and addressed immediately. The module is presented over two semesters, and is concluded with a research project of 10 to 15 pages, which relates to the content of either the BSc or the BCom programme, depending on the stream that the students are following.

Fifty students are participating in a pilot project where they conduct research on an issue that is of relevance to the community, with the aim of resolving a problem that can improve people's lives. Some of these projects involve collaboration with lecturers and staff from the University's Faculty of Education at several early childhood development centres in Mamelodi within the vicinity of the campus. The other students' research projects are related to either Chemistry or Business Management, depending on the stream they are following.

The success of this programme is particularly visible in the academic success of the Mamelodi Campus students who enter the mainstream programmes after their first year of study. Ilse notes that she sees many of her previous students who comment that they feel much more confident in their abilities to process academic information than some of their counterparts who started in the mainstream programmes.

Statistics

Christine Kraamwinkel is the Module Coordinator for the Statistics modules presented on the Mamelodi Campus. Some 300 students from different programmes take this module in their first year of study. Christine is passionate about her subject, and wants to see her students develop the same love of mathematics as she has.

After graduating with a BSc degree in Actuarial and Financial Mathematics and an honours degree in Mathematical Statistics from the University of Pretoria, Christine started tutoring in the Statistics Department on the Hatfield Campus. When a position as an assistant lecturer opened up on the Mamelodi Campus, she was keen to transfer her knowledge and skills to students who needed additional support to master this subject. Statistics forms the foundation for many programmes in both the BSc and BCom programmes, which is why it is essential to get a good grasp of the mathematical principles that underlie the subject.

Christine has found that there is a big gap between high school and university, which has to be bridged, and students who benefit from the Foundation Programme are often better equipped to continue with this subject than those in the mainstream programme. In addition to their classes, students attend smaller tutorial sessions in groups of 30 to 50 students. Christine is assisted by eight tutors, two of whom are alumni of the Mamelodi programme, and thus understand the challenges experienced by these students.

The module includes project work, in which the students have to conduct small descriptive and inferential studies. This includes identifying the sample, deciding on the best sampling method, entering the data and reaching a conclusion based on the data that has been obtained.

One of Christine's former students is Quintine Mkhondo, who graduated from the University of Pretoria at the age of 19 in April 2017. He is currently enrolled for an honours degree in Mathematical Statistics and is giving back to Mamelodi by tutoring students in the module.



Discussions following Prof Chen's visit to Mamelodi Campus.

Encouraging the study of statistics

Mamelodi Campus was visited by Prof Din Chen, Extraordinary Professor in the Department of Statistics and Distinguished Professor at the University of North Carolina, Chapel Hill. The purpose of his visit was to share with students the value and career opportunities available to those who study Statistics, as well as the pathways available for obtaining formal qualifications in Statistics. Currently, Statistics is considered among the top jobs in the world. The students appreciated this encouragement from their international visitor.

Business Management

Salomé Pretorius is the Module Coordinator for the Business Management module presented on the Mamelodi Campus. A total of 178 students from the BCom Foundation Programme take this module in their first year of study.

As the concepts that form part of the Business Management module are often foreign to school-leavers who may not have taken business-related subjects in matric, it is important to include a practical element to the module. This gives students a better understanding of the theory that they are required to master.

Some of the innovative teaching methods that form part of this module include the establishment of a Google Plus community to communicate with students, which is very interactive and informal. The students find this an exciting method of engaging with the content of the module.

Students also take part in the Glo-Bus business simulation game, in which participants compete against students around the world to develop winning business strategies. This enables students to apply the knowledge they have acquired in a real-world situation. The participants

at Mamelodi Campus are doing so well in this competition that they are currently ranked under the top 25.

The Department of Business Management on the Mamelodi Campus is closely associated with the Mamelodi Business Clinic, and a community engagement project forms part of their curriculum. They are involved in the activities of five early childhood development centres within close proximity of the campus, and investigate ways in which they can improve the management and profitability of these centres. This entails the practical application of the theory that forms part of their programme. After doing a situational analysis of the strategic management and operation of the centres, the students are able to propose changes to the centres' supply chain processes in order to increase their profitability, which will enable the centres to improve their service delivery to the parents and children of Mamelodi.

According to Salomé, the personal attention that the students receive due to the small classes and practical exercises enables them to achieve greater success academically than they would have done in the mainstream programme.

GLO-BUS DEVELOPING WINNING COMPETITIVE STRATEGIES
2017 EDITION

Global Top 25 Performers
Top 25: Overall Game-To-Date Score

The Overall Game-To-Date Score rankings are always based on a 50%-50% weighting for the Investor Expectations and the Best-in-Industry scoring standards, yielding a maximum weighted average score of 100. To further ensure that the overall performance scores of all companies worldwide are calculated on the same basis and thus truly comparable, bonus points are not included.

Rank	Company Name	School / Organization	Score
1	C-The Drone Zone Industry 1	Central Penn College Instructor: Lipschutz/Babinchak/Habachch	109.0
2	C Company Industry 5	Queensland University of Technology Instructor: Luca Casali	108.5
2 (tie)	H KOLTT Consortium Industry 4	University of Pretoria Instructor: Salomé Pretorius	108.5
2 (tie)	ISky Net Industry 5	University of Pretoria Instructor: Salomé Pretorius	108.5
5	B FunSightFlight Industry 4	National Louis University Instructor: Roy Kaelin	108.0
6 (tie)	B-Permit Industry 2	Hotel Institute Montreux Instructor: David Mc Partand	107.5
6 (tie)	A Company Industry 10	University of Technology Sydney Instructor: Zherish Opperman	107.5
6 (tie)	GOD Industry 7	University of Technology Sydney Instructor: Zherish Opperman	107.5
6 (tie)	EPicture Industry 1	Montclair State University Instructor: Jeffrey Monacelli	107.5
10 (tie)	Falcon Eye Industry 1	Monash South Africa Instructor: Corne Meintjes	107.0
10 (tie)	C-Sky Eagle 2.0 Industry 6	University of Pretoria Instructor: Salomé Pretorius	107.0
10 (tie)	Electron Industry 3	University of Technology Sydney Instructor: Zherish Opperman	107.0

Salomé's students are performing exceptionally well in Glo-Bus for first-year Business Management students. If this teaching method succeeds on the Mamelodi Campus, its viability for implementation in the mainstream programme can be investigated.

Campus developments



Mamelodi Campus is continuously investing in its infrastructure. Here are some highlights:

- Installation of fibre-optic cable connections
- Roll-out of Wi-Fi on campus in the lecture halls
- Construction of the campus stand-by generator
- Upgrading of the VIP room
- Development of social learning spaces in the library
- Development of the Disability Unit in the library

Valuable support for Mamelodi Campus students



This donation will go a long way to ensure the future success of the students.

This year, FirstRand donated some 100 second-hand computers in a usable condition to the University. These were donated to needy and deserving students, including those on the Mamelodi Campus.

On 19 May 2017, Prof Nthabiseng Ogude, Dean of Mamelodi Campus, presented 31 computers to students selected through Student Support Services in the Department of Student Affairs on the Mamelodi Campus.

This initiative is in support of the University's FLY@UP campaign, which encourages students to complete the requirements for their degrees in the minimum prescribed time, and the growing emphasis on and roll-out of the hybrid learning model for teaching and learning. This model sees information and communication technologies being used to extend learning beyond the physical classroom or lecture hall.

Students were selected on the basis that they took the responsibility to ask for help to improve their academic development on a regular basis, and that they were identified

as having difficulty accessing technology should the campus be forced to shut down and classes moved onto online teaching and learning platforms. These students have high academic potential, but lack the means to live up to this potential by not having their own computers. Some students were also identified as being incapable of purchasing their own computers through the Student Academic Readiness Survey (STARS) and the National Student Financial Aid Scheme (NSFAS). Many of these students never had access to computers before they entered university and therefore experienced problems when working on the online platforms and in the Academic Information Management (AIM) practical module.

This much-appreciated donation will go a long way to ensure the future success of these Mamelodi Campus students.

Empowering Mamelodi learners to reach their academic goals with the Mamelodi Mathematics and Science Programme (MMSP)

The MMSP seeks to equip learners in schools in and around Mamelodi with the Mathematics and Physical Science skills required to excel in their school work and ultimately qualify for admission to a university degree of their choice.

On Saturday, 22 April 2017, the Vice-Chancellor and Principal, together with other members of the University of Pretoria's Executive, deans, deputy deans, directors of support services, corporate partners like ABSA, and local school principals participated in the relaunch of the MMSP in the Mamelodi Campus's Arena. The relaunch was occasioned by the new focus, structure and partnership characterising the MMSP, which is now partnered with JuniorTukkie, the Kutlwanong's Promath Centre and the Hatfield Christian Online School's e-learning programme.

A total of 450 learners from schools in Mamelodi between Grade 10 and Grade 12 form part of the MMSP on Mamelodi Campus. The learners attend extensive weekend classes at the Promath Centre and visit the campus one grade per day to supplement their learning through online exercises on the campus.

The MMSP is another way the Mamelodi Campus is empowering young people in its community to reach their goals and make a positive contribution towards their futures.



Mamelodi Campus relaunching its MMSP.



Representatives of the MMSP partners, Kutlwanong, Promath, Hatfield Online School and Dimension Data, following the meeting with Prof Ogude and Dr Mwambakana.

SOLIDIFYING PARTNERSHIPS

As a follow-up to the relaunch of the MMSP in March, Prof Ogude met with the MMSP partners, Kutlwanong, Promath, Hatfield Online School and Dimension Data, on the Mamelodi Campus on 23 August. These partnerships will ensure valuable support for the programme.



CAFCA performers at the Tjo! Storyfest.

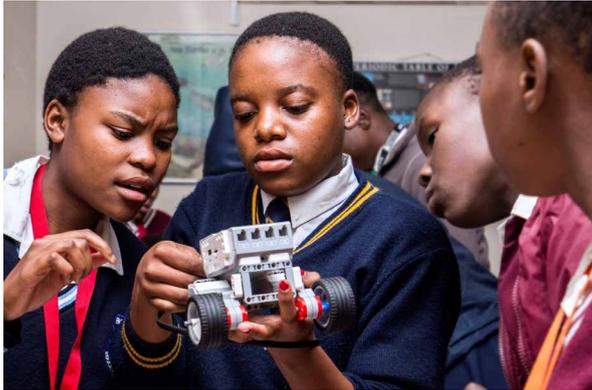
CAFCA Jazz Music Academy: Fostering excellence in musical education from an early age

Mamelodi Campus hosts the Cultural Artists for Cultural Advancement (CAFCA) Jazz Music Academy. CAFCA offers school learners tuition in music theory and instrument mastery. The CAFCA Music Ensemble is a group of talented young people who have been able to nurture this talent through this Mamelodi Campus initiative. The CAFCA Music Ensemble regularly performs at University functions, which provides excellent exposure for the group.



Great fun at the MAE JEMISON US SCIENCE READING ROOM

The Mae Jemison US Science Reading Room (Mae J) is a fun-filled hub of activity for school learners on the Mamelodi Campus. It is an initiative of the US Embassy that advances its goal to prepare South African youth for the global workforce through the English language and enhanced educational opportunities. On 25 January 2017, Edwin Smith, Manager: Campus Operations on the Mamelodi Campus, welcomed learners back to Mae J after the holidays to kick off a new year of learning and interaction. The strong turnout of new and existing library members indicates high interest among high school learners living in Mamelodi and underscores the relevance of this project in the Mamelodi area. The Dean has had discussions with the US Embassy to foster closer collaboration between Mae J and the MMSP.



US Fulbrighter ignites excitement about STEM through robotics

On 31 May 2017, 45 high school learners worked together to build and program their own robots at Mae J. Dr Tanya Karp, a US Fullbright Scholar at the University of South Africa and an Associate Professor of Electrical and Computer Engineering at the Texas Tech University, provided them with hands-on guidance. This is one of the many opportunities Mamelodi Campus and the US Embassy have in store to get the youth excited about STEM study fields.



Youth Citizen Action Programme (Y-CAP) Award Ceremony

On 29 August 2017, the US Embassy recognised the achievement of a group of Mamelodi learners for conceptualising, organising and implementing civic projects that sought to create solutions to problems in their school communities. The learners were participants in a US Embassy-sponsored programme at Mae J, which, in partnership with Charities Aid Foundation Southern Africa (Cafsa), the Youth Citizens Action Programme (Y-CAP) and Empowervate, hosted the programme to develop leadership and project management skills. The three judges were Dr Jeanine Mwambakana from the University of Pretoria, Simon Atkins, a Y-CAP alumnus, and Assistant Cultural Affairs Officer at the US Embassy, Amy Christianson.



Environmental Quiz Competition

On 27 May 2017, eight learners represented Mae J at the Environmental Quiz Competition hosted by the Walter Sisulu Environmental Centre (WSEC) in Mamelodi. The WSEC aims to encourage learners in the Mamelodi community to use environmental resources in a sustainable way through environmental education programmes.



Animal welfare awareness

On 7 June 2017, five students from the University of Pretoria's Faculty of Veterinary Science informed learners at the Mae J US Science Corner about general animal care. Topics included rabies, dog fighting awareness, responsible animal ownership, primary animal health care, as well as careers in Veterinary Science.



The Woman's Day Sports Celebration brings competitive sport to the Mamelodi community in a fun environment.

WOMAN'S DAY SPORTS CELEBRATION

On 9 August 2017, Mamelodi Campus hosted the inaugural Evah Mokwape Woman's Day Sports Celebration. The initiative came about after a realisation of the need for sports development at grassroots level by Evah Mokwape, former captain of Mamelodi Sundown's ladies team and vice-captain of the South Africa's ladies' soccer team, Banyana-Banyana. The event saw a number of celebrity appearances and events in ladies soccer, men's soccer, under-13 soccer, ladies netball and aerobics.

Recruitment drive 2017



On 19 August, Prof Ogude welcomed over 300 Grade 10, Grade 11 and Grade 12 learners and their parents to Mamelodi Campus as part of the campus's new recruitment drive. The learners were introduced to the notion of Mamelodi Campus being an alternative pathway into STEM and commerce fields of study. Participants in the event explained the various admission requirements for study at the University to the learners and their parents, as well as the processes pertaining to financial assistance. Initiatives like this will go a long way towards Mamelodi Campus achieving its goal in terms of increased student numbers.

Here's your chance: Foundation Programmes and admission requirements

Foundation Programme	NSC with admission for degree purposes	NBT	APS	Mathematics	Physical Sciences	Two languages, of which one must be English or Afrikaans	Life Orientation (excluded when calculating APS)	Other
BSc (Mathematical Sciences)	Yes	Recommended	26	Level 5	–	Level 4	Level 4	Three other subjects
BSc (Physical Science)	Yes	Recommended	26	Level 4	Level 4	Level 4	Level 4	Two other subjects
BSc (Biological and Agricultural Sciences)	Yes	Recommended	24	Level 4	Level 4	Level 4	Level 4	Two other subjects
BCom	Yes	Recommended	26	Level 3	–	Level 4	Level 4	–

For information regarding your Foundation Programme study career, as well as application and admission to the programmes, please visit <http://www.up.ac.za/en/faculty-of-natural-agricultural-sciences/article/16226/up-four-year-programmes>

International collaboration with Rutgers University

The University of Pretoria has adopted the anchor strategy as a means of leveraging university resources and capacities to help develop the areas surrounding its campuses.



Prof Nthabiseng Ogude (top) and Dr Kyle Farmbry (bottom) leading discussions.



Participants in the Mamelodi Collaborative at the meeting held on 31 May 2017.

On 31 May 2017, the Vice-Chancellor and Principal, Prof Cheryl de la Rey, officially welcomed and hosted a delegation from Rutgers, the State University of New Jersey's Newark Campus, led by Dr Kyle Farmbry, the Dean of the Graduate School at Rutgers Newark. Rutgers Newark has extensive experience as an anchor institution. The partnership imagines the two universities sharing experiences, building capacities and leveraging their research outputs. It plans to develop strategies on how best to roll out anchor strategies, not only for the two international partners, but also for other institutions similarly challenged to engage with their surrounding environments. The meeting was a further consolidation of the partnership between Rutgers University and the University of Pretoria, conceived as the Mamelodi Collaborative.

An anchor institution is an institution that serves as a major stakeholder in its area. Universities are typical anchor institutions because they have the ability to influence the lives of the people who live in their surroundings. It is the social responsibility of anchor institutions to contribute to the economic stability and growth of the local economy to ensure their own long-term sustainability, as well as that of the areas they serve.

Mamelodi Campus serves as the Mamelodi arm of the University's anchor strategy. Through this strategy, the University intends to increase its investment in the area by, among other things, procuring goods and services, and hiring staff locally, helping to incubate new businesses, supporting job-creation projects, and training local people

to make them more marketable in a competitive job market, all with a view to growing "community wealth".

A key component and focus of the partnership will be building research activities around STEM-related access and success initiatives and efforts at both institutions.

The Rutgers University delegation comprised Dr Kyle Farmbry, Dean of the Graduate School, Tim Raphael, professor in arts, culture and media, and also the Director of the Newest American project, Tim Eatman, Dean of Honors Living and Learning College, Michael Simmons, who heads the Cornwall Center for Metropolitan Studies, Melissa Valle, a postdoctoral candidate who will be starting as an assistant professor in August, Deseray Graham from the Office of the Dean of the Graduate School, and Rebecca Pena, Programme Association in the Graduate School.

The University of Pretoria delegation, led by Prof Nthabiseng Ogude, Dean of the Mamelodi Campus, included deans, deputy deans, and academic staff and students from the University of Pretoria. Prof Alex Antonites, Head of the Department of Business Management, delivered a presentation on the Mamelodi Campus Business Clinic and Dr Carin Combrinck of the Department of Architecture, and her honours and master's students presented their projects aimed at revitalising the spacial environment in Mamelodi and around the campus in line with the anchor institution concept. Chemistry lecturer, Christine Mundy, also presented innovations in science teaching on Mamelodi Campus.



TJO!

STORYFEST

Mamelodi Campus not only supports students by helping them to excel in their studies, but also by uplifting their community. In the spirit of maintaining Mamelodi Campus's position as a hub of activity in the heart of Mamelodi, a range of community events feature prominently on its calendar. Tjo! Storyfest is one of these.

Prof Vasu Reddy, Dean of the Faculty of Humanities, launched Tjo! Storyfest on the Mamelodi Campus on Friday 30 June and Saturday 1 July 2017. Tjo! Storyfest, an annual event, is a vibrant festival of stories, culture and history. It also encourages learners to read.

The event operates from the notion that everyone has a story to tell. It is important to pay attention to these stories in the pursuit of understanding one another and thriving side by side.

Tshwane stories and writers were celebrated through a carefully curated programme featuring films, book readings and discussions, community talks, oral tributes, musical storytelling, informal discussions and reflection.

Tjo! Storyfest is a unique cultural event that celebrates local narratives across artistic disciplines. It seeks to bring the Mamelodi community together to share and appreciate their own stories and histories, and to find ways to gather and archive these untold stories through community engagement.

The event also aims to encourage a stronger reading and book-buying culture, specifically in school learners. This has the potential to encourage young people to explore ideas beyond their frame of reference, and subsequently engage with social issues in a positive way. Tjo! Storyfest seeks to create a conducive and safe environment for young people to engage with social issues affecting them, as well as to create a platform that facilitates activism, civic responsibility, inspiration and imagination.

The project has been a close collaboration between the non-profit organisation, Orenda Arts Collective, the University's Faculty of Humanities and Mamelodi Campus, as well as the Puku Children's Literature Foundation.

The two days of activities included a celebration of Tshwane-born writer, Kagiso Lesego, whose novel, *The Mending Season*, is included in the Grade 12 curriculum, a performance by the CAFCA Motlosana Youth Jazz Band and a special tribute to activists Florence and Fabian Ribeiro,

whose daughter, Dr Barbara-Ann Ribeiro, shared the family's history and told stories of how her parents became social activists in Mamelodi.

Attended by literary greats like Zakes Mda, the programme also included contributions by Pamela Ngubeni (the 13-year-old author of the poem "I'm being bullied"), Dr Nape 'a Motana (author of the book *Hamba Sugar Daddy*), Marah Louw (veteran performer and author of *It's Me, Marah*), MoAfrika Mokgathi (poet, jazz musician and cultural activist), Prof Keorapetse Kgositsile (National Poet Laureate), Bongani Madondo (pop culture, arts critic and author), Masello Motana (poet, singer, historian and cultural activist), Zanele Ndlovu (indigenous instrument music teacher, storyteller and children's author), Mthwakazi Lenga (indigenous instrument teacher, vocalist and cultural activist), Sara Chitambo (sexual reproductive health activist for the ZAZI campaign), Dr Lindelwa Dalamba (musicologist and cultural historian), Squire Mahlangu (veteran Mamelodi activist) and Thabiso Mahlape (publisher at BlackBird Books). Celebrities Hlubi Mboya, Sisanda Henna and Lindiwe Matshikiza led interactive readings.

The event was attended by students, as well as learners and teachers from schools in and around Mamelodi, and received valuable support from social and other media platforms. The festival donated books to ten Mamelodi school libraries. In the future, the event has the potential to raise further awareness of social issues, initiate a community-based cultural archival project, sustain school-based reading clubs and bring the community of Mamelodi together on Mamelodi Campus.

SPRING DAY AT UP



The Mamelodi Campus team joined the rest of the University staff for Spring Day activities on 13 September 2017.



Mamelodi Animal Health Clinic (MAHC)

MAHC was established in October 2011, and provides primary animal health care to the community of Mamelodi and the surrounding areas of Eersterust and Nellmapius.

The main service of the clinic is sterilisation and vaccination, through which it seeks to combat threats like rabies. It provides affordable veterinary services to these communities to improve the wellbeing of their animals. On average, the clinic sees between 150 and 200 patients a week.

The clinic forms part of the Veterinary Professional Life (VPL) 300 module for third-year Veterinary Science students. These students visit schools and public facilities on an annual basis to aid in educating the community on animal care and animal health. It also provides opportunities for practical learning to final-year Veterinary Science students who spend a minimum of two weeks at the clinic as part of their Small Animal rotation.

First-year BSc students on Mamelodi Campus who are still applying to be selected for the Veterinary Science programme volunteer at the clinic to gain exposure to and experience in their intended field of study and participate in community service.

Mamelodi Business Clinic

In 2011, the Mamelodi Business Clinic was established by the Department of Business Management to enable entrepreneurial development through innovative interventions. These serve to address social problems such as unemployment and poverty faced by the Mamelodi community.

1 546

clients registered on the Mamelodi Business Clinic database

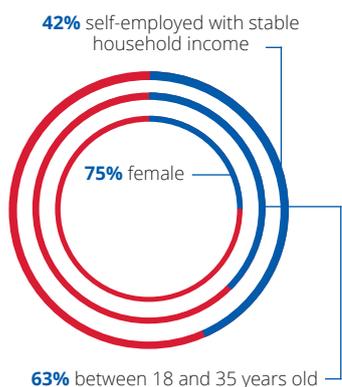
1 184

clients participated in training programmes

534

clients received mentorship through the incubation programme

Client demographics



Beneficiaries of initiatives:

- Youth development programme in conjunction with Paradise Church
- ABSA business plan training
- ABSA and AHI entrepreneurship training
- Women in Dialogue Entrepreneurial Empowerment Programme
- Cooperative banking Engagement seminar
- Service learning programme
- Supplier investment system

Siyathemba Clinic for Occupational Therapy

The Siyathemba Clinic was officially established in 2010, and is actively involved in community engagement. The primary goal of the clinic is to provide schoolchildren with free therapy.

The clinic services children with disabilities such as cerebral palsy, learning difficulties, mental illnesses and epilepsy. Treatment options include individual and group therapy. It is run by final-year Occupational Therapy students, and thus operates in three blocks in a year that run for seven weeks. On average, the clinic sees four to eight clients a day who are usually referred by the Itsoseng Clinic.

Open Monday to Friday from 08:00 to 16:00

Itsoseng Clinic



The Itsoseng Clinic was established in 1994 by Dr Linda Blokland and her colleagues of the Department of Psychology at the time. The Department continues to maintain the clinic, with the help of donations.

Its main focus is to offer a comprehensive psychological service to the community in order to turn needs into opportunities. It does this by providing an open, accepting atmosphere where the needs of clients who experience psychological difficulties that result from mental health and other life stressors, which often occur from the challenging socio-economic conditions in Mamelodi, can be addressed.

The primary services include psychological assessments, psycho-legal services, counselling with individuals, groups, couples and families for a variety of issues (including depression, stress-related conditions, early childhood development and learning problems, parent-child relationships, addiction in the family and destructive coping skills like drug abuse, violence and aggression, as well as domestic violence, women and child abuse, and rape), expressive art therapy and career guidance, as well as psycho-education workshops and conferences aimed at preventing and dealing with mental health and family and community issues. It also acts as a training base for Psychology students. The clinic provides opportunities for young people to participate in projects to develop themselves, their capacity and their skills to become autonomic, self-sufficient leaders in the community. The aim is to support the community to take ownership of its own growth and development.

Itsoseng aims to address the shortcomings of Western-based approaches to psychotherapy by providing a context-sensitive service through continuous context-specific research in Mamelodi. It also aims to provide quality care and opportunities for community members to experience growth, development and healing. An average of 500 monthly appointments are made, and some 60 new clients are seen each month. The team is made up of seven clinical second-year and seven clinical first-year master's students, five counselling second-year and six counselling first-year master's students, three art therapy interns, one psychometry intern, two counselling interns and 24 volunteers.